



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

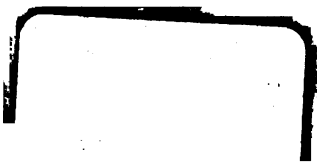
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

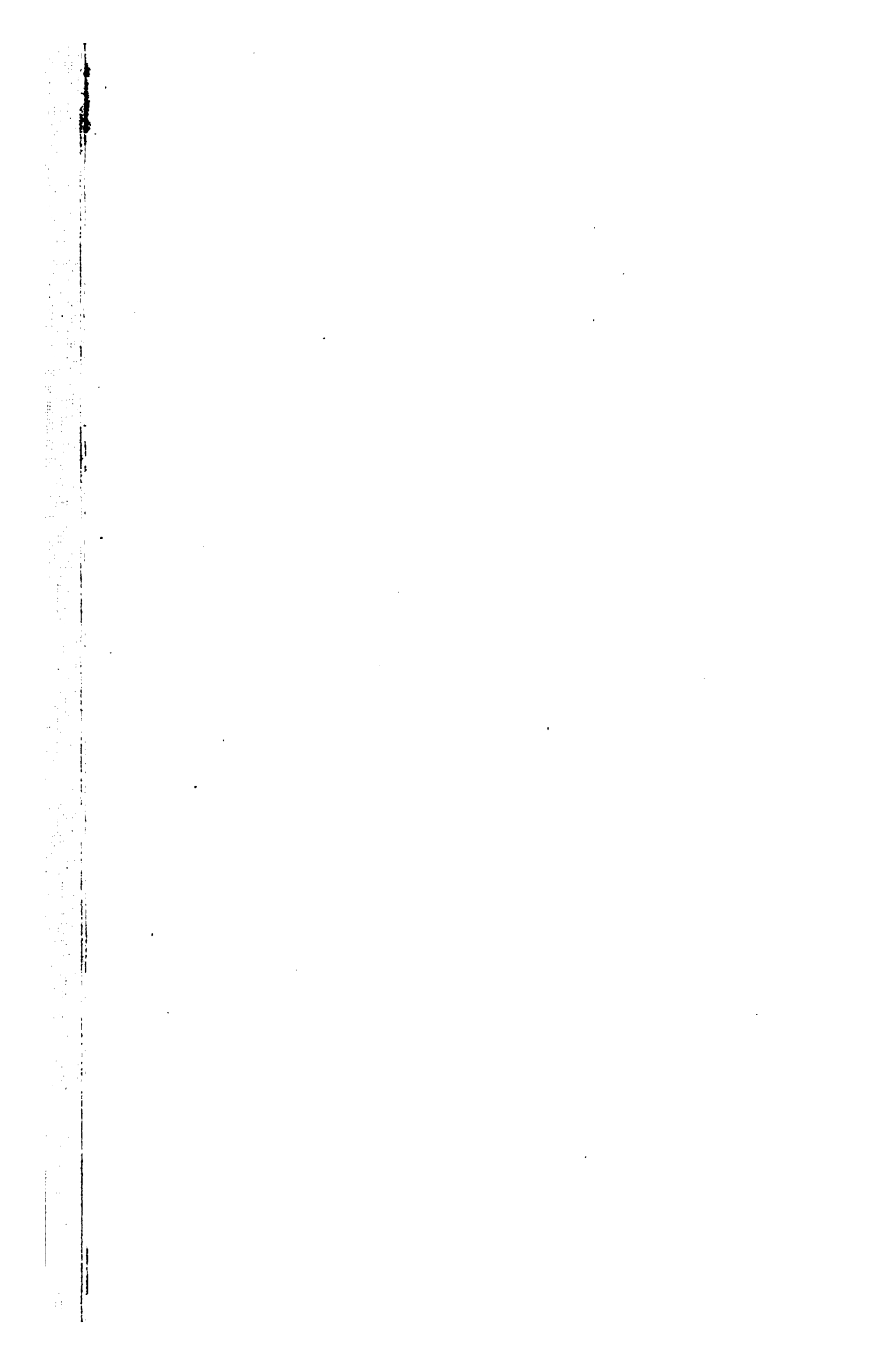
About Google Book Search

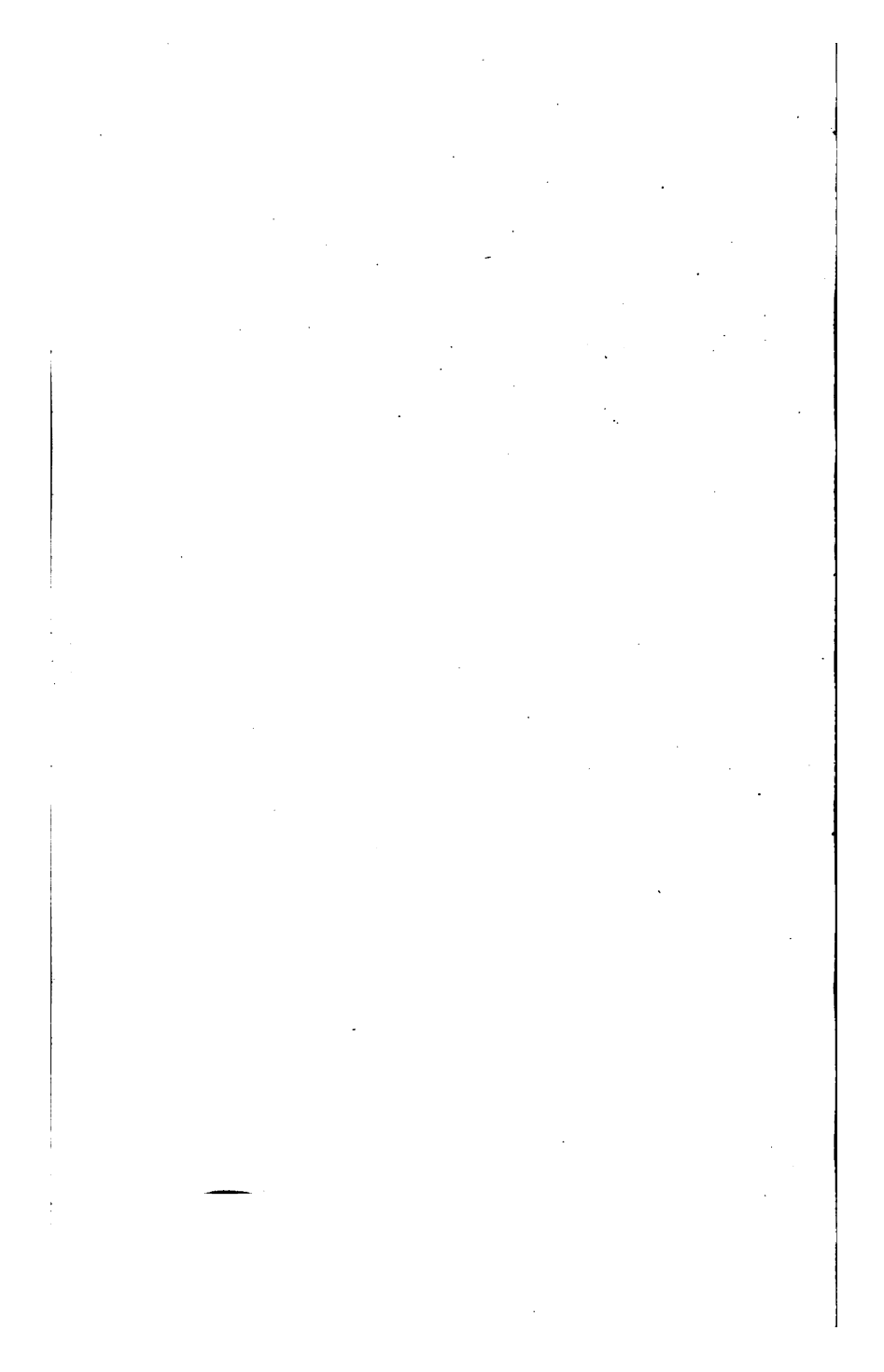
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



M 4/11
St John







**NATURAL HISTORY AND SPORT
IN MORAY**

CH. 1000

Printed by R. & R. Clark

FOR

EDMONSTON AND DOUGLAS, EDINBURGH.

LONDON . . HAMILTON, ADAMS, AND CO.

CAMBRIDGE . MACMILLAN AND CO.

DUBLIN . . M'GLASHAN AND GILL.

GLASGOW . . JAMES MACLEHOSE.

**THE NEW YORK
PUBLIC LIBRARY**

**ASTOR, LENOX AND
TILDEN FOUNDATIONS**

R

L



GROUP OF WILD SWANS.

NATURAL HISTORY & SPORT IN MORAY

COLLECTED FROM THE JOURNALS AND LETTERS

OF THE LATE

William George

CHARLES ST. JOHN

AUTHOR OF 'WILD SPORTS OF THE HIGHLANDS'



ASTOR LIBRARY
DONATED
NEW-YORK

EDINBURGH

EDMONSTON AND DOUGLAS

MDCCCLXIII

1863

PROY W-11
2100
10000

P R E F A C E.

No encomium of the editor could so effectually recommend this little volume to a large class of readers as the knowledge that its text consists entirely of the observations and notes of Charles St. John—a name dear to lovers of Nature and manly sport. It is made up of entries in his Journals and Note books, incidents related in letters to his friends, and a careful description of the birds of Moray which he left in MS. With these materials, hitherto unpublished, the substance of the “Field Notes of a Naturalist,”* which he published in 1849, has been incorporated.

Among Mr. St. John’s Notes is the following passage, shewing his views of the duty of an observer of natural history :—

“ I have been particularly careful to describe and note down nothing, the authenticity of which I am not certain of. Indeed, every bird here mentioned, with one or two exceptions, I have either killed or seen myself during my wanderings in wood and plain for several years in this district. I have carefully avoided the great error of taking things on hearsay. In the very few instances in which I have been obliged to depend on the eyes of others I have

* A Tour in Sutherland, 2 vols. 1849.

been careful to guard against being knowingly or unknowingly deceived. A book of this sort should be a book of reference, and, as such, to be thoroughly depended on, and I can assure my readers that they may fully depend on the truth and correctness of everything here mentioned.

"I have not described the plumage of most of the birds with great minuteness, but have contented myself with giving only sufficient descriptions to enable them to be recognised. I should refer those who want more minute and scientific accounts to Yarrell or Jennings, whose correctness on these points is undeniable. With regard to the size and weight of birds, most authors run into the error of marking them down far too minutely. Out of a dozen birds of the same kind you will scarcely find two of exactly the same weight and dimensions. Yet we find the width and length of many species marked down by authors in inches and lines, and the weight in ounces and half ounces. Bewick, though so beautifully correct in his delineations of plumage and figure, in which he surpasses all other authors, is quite incorrect in the weights of birds which he constantly gives. It would be invidious to point out the trifling errors found in the descriptions of different authors, though they certainly are sufficiently numerous. For my own part, I have avoided too minute descriptions, for fear of going 'beyond my tether,' though I certainly have had the advantage of killing and seeing in their native state every bird (with, as I said before, one or two exceptions) which I describe.

"I have also taken the nests of all which breed in Scotland, without, I believe, one exception. I have also watched the habits of feeding, etc., of all, from the golden eagle to the golden-crested wren, from the wild swan to the teal, and have had opportunities of so doing which perhaps no other person has had.

"The birds which reside constantly in this district are very numerous, and include some kinds very rarely found to breed elsewhere in Britain, such as the cross-bill, the siskin, the crested titmouse, in the woods. In the marshes we have the water-rail, and the shoveller duck, birds seldom found in the breeding season. The jack-snipe I have never found breeding, but have killed the YOUNG birds with the down still adhering to their feathers at so early a period of the autumn as to make me believe that they must have been reared at no great distance. Nothing proves how dangerous it is to depend on the EYES and judgment of others in these matters, more than the fact of three or four dunlins being brought to me as jacksnipes in the month of July, by a gentleman who considers himself, and who really *is*, a most excellent sportsman, and a first-rate shot, particularly at snipes, and one of many years' constant experience. Again, I have had a moor-hen sent to me as a most curious bird, in a country too where they abound. I could enumerate several similar instances, but will not do so, as these errors have been made in a kind anxiety to shew me what was supposed by the donor to be curious and interesting to me. These and similar circumstances, however, have made

me perhaps over cautious in trusting to any one's eyes but my own.

"There is so great a variety in the plumage of some kinds of birds at different ages and seasons that it requires nearly a lifetime to become perfectly acquainted with them—for instance, in the case of some of the waders, gulls, etc. The hawks also vary very much in size, colour, etc., according to sex and age, but I know their different changes sufficiently well not to be mistaken.

"I have no doubt that the coast is visited at irregular intervals by many sea and water fowl which are not observed or obtained. A bird exactly answering to the glossy ibis was killed on the coast by a man who told me of the circumstance, describing the bird as a 'cross between a curlew and a blackcock.' Many other varieties may visit us, and escape more fortunately."

While such was our author's manner of observing, the extent of his range of observation may be stated in the words of an accomplished naturalist, the Rev. Dr. George Gordon of Birnie :—So full is Mr. St. John's, "List and Account of the Birds of Moray," that it includes all but a very few of the species, of which there is any record or information of their ever having been seen, even within the PROVINCE OF MORAY, a wider region than the Shire or County. The few exceptions are the following, some of which Mr. St. John in another of his publications, mentions as occurring in Inverness-shire. The swallow-tailed falcon (*Falco furcatus*, Lin.), Mr. Dunbar ; the garrulous roller (*Coracias*

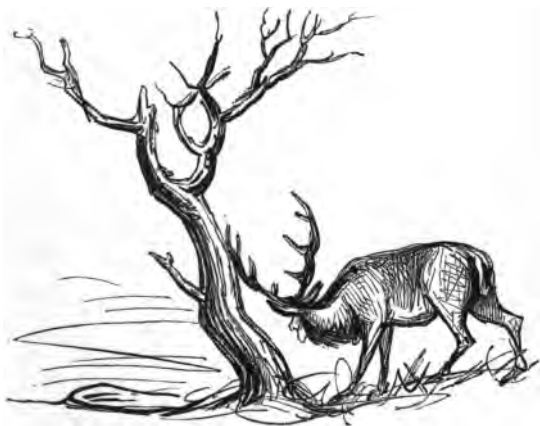
garrula, Lin.), killed at Ballindalloch (*Zoologist*, p. 511), and now in the Elgin Museum; the black redstart (*Sylvia tithys*, Scop.), at Manse of Birnie in 1856 and 1858; the three species of woodpecker, *major*, *viridis*, and *minor*, have also been included among the provincial denizens. The great bustard (*Otis tarda*, Lin.) was killed many years ago at Oakenhead by the late William Young, Esq., of Burghead, as noticed by Dr. Fleming in his "British Animals;" and the stormy petrel has at times been driven on the southern shore of the Moray Firth (*Zoologist*, p. 515). In confirmation of Mr. St. John's remarks on two of the rarest of Scottish birds, it may be here stated that the hoopoe was lately killed at Lossiemouth, and a turtle dove, in full feather, was shot at Waulkmill near Elgin, in October 1858. Mr. St. John is the first to have met with the haw-finch, the wryneck, and the rose-coloured pastor, in this district. No other ornithological writer had noticed here the more common marsh titmouse (*Parus palustris*, Lin.), as well as some of the Waders, and of the Web-footed order, which he includes and has described."

The editor's work has been simply to arrange and classify. The plan adopted may have, unluckily, given a disjointed appearance to the text, but it must be considered that the materials did not admit of being thrown into the shape of continuous narrative without mixing the author's observations with the writing of others, and so injuring the effect of the testimony of so careful an observer. On the other hand, the method adopted by the editor has the

advantage of bringing together incidents deriving much of their interest from occurring at the same season, often on the same day, of successive years.

The pleasant duty of putting in order these materials has been lightened by the cordial co-operation of two of the author's personal friends, well acquainted with the country where he made his observations, who have revised the sheets at press. To these two gentlemen for their courteous assistance, and to them as well as to Mr. Hancock of Newcastle, Mr. Jeans of Bath, and Mr. Snowie of Inverness, for the use of Mr. St. John's letters addressed to them, the widow of Mr. St. John is under special obligation.

EDINBURGH, JULY 6TH, 1863.



MEMOIR OF MR. ST. JOHN.

CHARLES ST. JOHN, or to speak accurately, Charles William George St. John, the author of "Wild Sports of the Highlands," and of these observations and notes of natural history, was the son of General the Hon. Frederick St. John, who was the second son of Frederick, second Viscount Bolingbroke. Charles was born 3d December 1809. The first account I have of him is from his school-fellow and dear friend, a frequent companion in his after years, and a fellow-student of nature as well as fellow-sportsman. Mr. Thomas Jeans writes to me:—

"My friendship with Charles St. John began about the year 1821, when he was first sent to school at Midhurst, in Sussex, where Dr. Bayly was head master. He might then have been about eleven years of age. I remember perfectly his first appearance as a 'new boy'—handsome, fair-haired, quiet, and gentlemanlike—I can see him now, standing near the ponderous 'iron door' which had just been shut upon him by the porter, and which separated us from the outer world. My happening to know a relative of his was our first bond of union, and the similarity of our tastes cemented it. We became friends at once, and worked our way up together in the school. Though I was his senior by a year or two, he was far ahead of me in all the

theory and some of the practice of 'wild sports.' But it was under the tuition of a certain old pensioner, who in virtue of his weekly function in the school, went by the name of the drill sergeant, that we both attained to no mean proficiency in spinning for trout and trolling for pike in the river Arun whenever we could shirk out of bounds on half-holidays, as well as in setting night lines artistically for eels.

"Even at that time St. John had the zoological bump largely developed. His box (or *scobb*, as we used to call it, after the Winchester fashion), was generally a sort of menagerie—dormice in the one till, stag-beetles of gigantic size, and wonderful caterpillars in paper boxes, in the other, while sometimes a rabbit, sometimes a guinea-pig, or perhaps a squirrel, was lodged below in a cell cunningly constructed of the Delphin classics and Ainsworth's Dictionary. He was scarcely without live stock of some sort.

"I think he must have left Midhurst after remaining there about four years, and then I lost sight of him for a time. In 1828 (I think) I found him appointed to a clerkship in the Treasury, junior to an old school-fellow of ours, Edward Ricketts, who, years afterwards, married a sister of Mrs. St. John's." Mr. Jeans speaks of his life at this time as "somewhat fast: his connections gave him the entrée everywhere (his aunt, Lady Sefton, was then a great leader), and the result was his giving the Treasury, as he used himself to say, 'notice to quit,' to prevent the proceedings being reversed, and he left town. Here is a hiatus in his history, or rather in my history of him. Ricketts could fill this page." Mr. Ricketts is good enough to recall for me his recollection of his school-fellow and

fellow-clerk at the Treasury. Their intimacy began, he says, "while St. John was chafing like a caged eagle at the desk of a Government office." And here Mr. Ricketts has some remarks which I cannot refrain from copying :—"If parents would but study the happiness and the probable success of their children rather than their own convenience in getting them off their hands, they would not commit such a fatal mistake as that of expecting a high-spirited lad, with our late friend's restless spirit and love of sport, to settle down to the drudgery of a clerkship. He had talents, as you know, he wrote a good hand, and worked with great rapidity, but his heart was elsewhere, and three or four years sufficed to prove the attempt an utter failure. During his periodical holidays he joined some friends in expeditions to the moors of the north of Scotland, where he found himself in his proper element, and whence he could not, or would not, tear himself to resume a duty which was odious to him, and his connection with the Treasury, which had begun in (I think) 1829, ceased about the latter part of 1833, or early in 1834."

Mr. Ricketts says St. John went little into general society ; "the formalities of London life were irksome to him, and when after he had left London some time, I visited him in his Ross-shire home, he seemed a far happier man than while writhing under the restraint of London conventionalities and official routine."

Some of that early aversion for mixed society which Mr. Ricketts describes in St. John, may, I think, be attributed to an impediment in his speech, which, like all such nervous affections, was most felt in his intercourse with strangers. It almost disappeared when he was among

familiar friends, and with them his conversation was easy and flowing.

Mr. Jeans, after speaking of St. John's life as a Treasury-clerk, says—"I next hear of him settled at Rosehall in Sutherland. The place was lent him by his cousin the late Lord Bolingbroke, and here he lived a perfectly secluded wild life, having good scope for improving his experiences in natural history, and a wide range for indulging his tastes for shooting and fishing."

It was on an expedition from Rosehall that St. John met Miss Anne Gibson, to whom he was married in November 1834. Miss Gibson had some fortune, a commodity in which her husband was sadly unprovided, and as the lady, with a true wife's devotion, accommodated herself to her husband's tastes and manner of life, he was enabled henceforward to live the life of a sportsman and naturalist in the Highlands, which was only modified when the necessity of educating a young family induced them to draw near schools. The St. Johns lived at various places rented with these views, chosen for their picturesque beauties, or capabilities of sport and opportunities of study of wild animal life. I have heard him dwell especially on pleasant recollections of Rosehall—of Aldourie—a charming place of the Tytler family on Loch Ness, and some others beyond the Moray Firth. But in due time he discovered the region best suited to his taste and happiness, in the "laigh" of Moray, a fertile and well-cultivated country, with dry soil and bright and bracing climate, with wide views of sea and mountain, within easy distance of mountain sport, in the midst of the game and wild animals of a low country, and with the coast indented by bays of the sea and studded

with frequent fresh-water lakes, the haunt of all the common wild-fowl and of many of the rarer sorts. It was in that country, for the most part, that St. John spent the last ten years of his active life, before he was struck by his fatal malady.

I became acquainted with Charles St. John in my autumn vacation of 1844, while I was Sheriff of Moray. He was then living at Invererne below Forres, and I used to shoot sometimes on an adjoining property. We had some common friends, and messages of civility had passed between us, but we had not yet met; when one day in October I was shooting down the river side and the islands, in the Findhorn, making out a bag of partridges laboriously. It was a windy day, and the birds going off wild spoilt my shooting, which is at best uncertain. While I was on the island, two birds had gone away wounded into a large turnip field across the river. I waded the river after them, and was vainly endeavouring to recover them with my pointers, when a man pushed through the hedge from the Invererne side, followed by a dog, making straight for me. There was no mistaking the gentleman—a sportsman all over, though without any “getting up” for sport, and without a gun. I waited for him, and on coming up he said he had seen my birds pitch, and offered to find them for me if I would take up my dogs. When my pointers were coupled, he called “Grip,” and his companion, a large poodle with a Mephistophiles expression, began travelling across and across the drills, till suddenly he struck the scent, and then with a series of curious jumps on all fours, and pauses between, to listen for the moving of the bird, he made quick work with bird No. 1,

and so with bird No. 2. I never saw so perfect a dog for retrieving, but he was not handsome. After this introduction St. John and I became frequent companions. I soon found there was something in him beyond the common slaughtering sportsman ; and he must have discovered that the old Sheriff had some tastes with which he could sympathise. The remainder of that season we were very much together, and often took our exercise and sport in company. On one of these occasions we went together to join a battue at Dunphail ; but the weather was too bad, and after waiting for some hours without taking our guns out of their cover, St. John and I returned to Knockomie, a cottage of relations of mine near Forres, who have made it my second home for many years. We travelled in St. John's dog-cart through steady heavy rain. I was well clothed in a thick top-coat, and he in a pea jacket of seal-skins of his own shooting, so that there was no suffering from the weather as we drove down through the shelter of the Altyre woods ; and the way was shortened to me by my companion telling story after story of sport and adventure, or answering with wonderful precision my questions about birds, beasts, and fishes. He stayed with me that night, and when we were alone after dinner, I broached a subject which had often come into my head since we were so much in each other's society. Why should he not give the world the benefit of his fresh enjoyment of sport—his accurate observation of the habits of animals ? At first he ridiculed the idea. He had never written anything beyond a note of correspondence—didn't think he could write, etc. etc. But at length he listened to some arguments. It was very true he had too much idle time, especially in winter—nothing he so

much regretted as that he was an idle man. He had some old journals that might be useful. He could note down every day's observations, too. In short, he would try his hand on some chapters next winter. And so it came to pass, that during next winter I was periodically receiving little essays on mixed sport and natural history, which it was a great pleasure to me to criticise ; and no one could take the smooth and the rough of criticism more good-naturedly than St. John. As these chapters gathered size and consistency, it became a question how to turn them to account, and this was solved by accident. At that time I was in the habit of writing an article occasionally for the *Quarterly*, and I put together one on Scotch sport, using as my material some of St. John's chapters, especially the story of the Muckle Hart of Benmore. The paper pleased Mr. Lockhart, "It would itself be sufficient" (he said) "to float any number . . . Whether the capital journal laid under contribution be your own or another's I don't know, but every one will wish to see more of it."* I received the Editor's letter at Knockornie, and, next day, the reading of it to St. John served for seasoning as we took our shooting lunch together beside the spring among the whins on the brae of Blervie. Our course was now plain. I divided the money produce of the *Quarterly* article with St. John, who rejoiced greatly in the first money he had ever made by his own exertions ; and, on my next visit to London, I arranged for him the sale of the whole chapters, the produce of his last winter's industry, which Mr. Murray brought out in the popular volume of "Wild Sports and Natural History in the Highlands."

* Letter from J. G. Lockhart, 20th September 1845.

St. John's life was, I believe, much happier from the occupation thus supplied. He kept journals more regularly from thenceforward, and he became an authority to be consulted on all questions of Scotch sport. He had already become, I may say, the friend of all his neighbours, and many regretted his change of abode, which took place two years later.

St. John formed acquaintance and commenced a life friendship with another person while at Invererne, whose tastes and habits much resembled his own—a good naturalist and accurate observer, a lover of sport on hill, and river, and loch, and curiously, a keeper of a journal with much more regularity and accuracy than his friend ever arrived at. This was Captain Cumming, now Sir Alex. Gordon Cumming of Altyre, with whom St. John, during the later years of his life, when they were brought nearer together in residence, associated, partook of sport, corresponded, more constantly and confidentially, perhaps, than with any other.

Unfortunately, St. John was not in the habit of preserving his correspondents' letters, and I am thus able to give only one letter from Captain Cumming, which may have been in his friend's mind when he contrasts the salmon-fisher of the Findhorn with the gentle angler of the lower pools at p. 236.

Sir Alexander's letter contains a wonderfully intelligible account of a morning's fishing. The scene is on the river Findhorn, above the junction of the Divie. *Rannoch* is the name of a spot where there is a "brig of ae hair," a single log thrown across the torrent.

From Capt. A. P. G. CUMMING to Mr. ST. JOHN, June 20, 1848.

My dear St. John—Do you remember saying a salmon was as good as lost if he went over the Ess on the Findhorn at Relugas? A strong and active fish played me a trick last week, and contradicted your idea, by taking me down from Rannoch over the Fall as far as the Pool above the Divie junction. The night had been stormy, with heavy rain, and although I expected “she” would “grow” in the course of the day, I thought that by an early start I might get a few hours’ fishing before the water came down, especially as fish very often take greedily *just before* a grow. I was at the river by four A.M., and commenced at Rannoch (Randolph’s Leap). I found the water much as I left “her” the night before, small and clear, the only chance of fish being just in the white broken water at the throats of streams, or in the deep holes amongst the rocks. Rannoch is fishable only from one small ledge or bench, about two feet square, and 25 feet above the level of the water, to which bench you must scramble down the face of the rock, and from this spot you fish the whole pool, beginning with the line as the fly comes off the bar of the reel, and letting out yard by yard till the fly is working in the “spoots” or narrow rapids, 80 to 90 feet down the stream. If you hook him you must play and kill him in the pool, *if possible*, your gillie clipping him on a small bed of gravel down below your feet, it being impossible to follow him if he takes down the water, from the small two-foot square ledge, without first ascending to the foot-path, and redescending to the bed of the river; this you cannot manage with a fish on, owing to trees and projecting rocks. The pool is fished from the right bank.

Well, I rose him at my feet almost, at the first throw, to a small fly about half an inch long; * he came deep and shy three

* Black floss silk body with golden orange tag, gold cord and silver speel, claret hackle with jay at shoulder; wing mixture of good mottled fibres and a gold crest, head yellow wool and tail of crest and fibres.

times, and refused to take it or any other. I guessed him at about 17 lbs. Leaving him to his own reflections, after making an appointment with him for a later hour, I tried the pools above, hurrying along to the best spots in anticipation of the water rising. I worked till eight o'clock, keeping on the same fly described before. I had more than average sport, killing four good new run fish, viz., one of 12 lbs., one 10 lbs., and two of 9 lbs. At eight, the water beginning to grow, I reeled up, and rushed down to Rannoch to show my early friend another fly; but the water having fairly commenced to grow, I put on a fly above two inches long,* and the tippet being triple gut, I, by an interposition of providence, put on a triple casting line. Having cautiously descended to my stand, I showed it to him at once; he made small bones of it this time, and rushing up like a bull-dog, or like one of your lovely Peregrines, took the fly greedily. I just let him feel I was at the other end of the gear, and knew instinctively that the good steel was well into something firm. At first he seemed not quite to realise the situation, and after a few sulky and dangerous shakes of the head took to sailing steadily up and down the pool, once or twice approaching the rapids below, but turning again by gentle persuasion; these tactics he continued for nearly an hour, my man waiting for him on the gravel below, and out of my sight. By this time the effects of the last night's rain became fully apparent, the still, dark pool below my feet had turned into a seething pot, without a quiet corner for the fish to rest in, and the water had risen nearly twenty-four inches above its size when I hooked him. The *upshot* was, he *shot down* the narrows, and went rolling heels over head down the foaming "Meux and Co.'s Entire" (this being the usual colour of our summer floods). To stop him was impossible; I held on above the rapid till I thought my good Forrest rod would have gone at the hand, and certainly the

* Body yellow pig's wool, rough spey hackle, and bright full wing.

fine single gut I had on earlier would have parted with half the strain.*

All I could do was to give him what line he required until he found a resting-place behind some rock ; this he did after rattling off fifty yards of line. Waiting some minutes till he seemed quiet, I threw off some ten yards more line, and turning the top of the rod up stream, I darted it down to my man on the gravel below, having cautioned him not to alarm the fish by letting the line get taught. To scramble up the rocks, and down again, to the gravel bed, to resume possession of my rod, was two or three minutes' work, and just as I seized hold of it, the fish having ventured from his shelter, was, in spite of his efforts, hurried down at racing pace, taking more line than I liked, while I followed, crawling and leaping along some impossible-looking country, such as I would not have faced in cold blood.

By this time he had nearly reached the Ess or fall, and all seemed lost. I do not think he really intended going over ; for when he felt himself within the influence of the strong smooth water, he tried his best to return, but in vain ; over he went like a shot, and long ere I could get round some high rocks and down to the lower part of the fall, I had 80 or 90 yards of line out, and to follow him farther on this side of the water was not possible, owing to the steep rock rising beside the stream. To add to the embarrassment of my position I found on raising the point of my rod, that in going over the fall the fish had passed beneath some arch deep under water, thus making my case appear very hopeless. But, determined not to give it up yet, I sent my man up to the house of

* *Memo, en parenthèse*—I once asked several old sportsmen what weight was on the line at the very heaviest strain you could put on with rod in hand, as when holding on like grim death to an insubordinate fish, the end of the line being attached to the hook of a spring balance—*i.e.*, what weight the balance would register. One man guessed 35 lbs., another, laughing at him, said he would bet 20 lbs. to be nearer the mark ; none guessed less than 15 lbs. ! The fact is, you cannot, with the best and strongest tackle, draw out more than 3½ or 4 lbs.

Relugas, where he found an old three-pronged dung fork and a garden line, with which we managed to construct a grapnel ; and at the second throw in, I got hold of the line below the sunken arch ; then fastening it to my right hand, I made my man throw the whole line off the reel and through the rings, and having drawn the remainder of the line through the sunken arch, and clear of the impediment, I formed a coil, and with my left hand pitched the end of it up to him, when he passed it through the rings again from the top of the rod, fixed it to the axle of the reel, and handed me down the rod to where I stood. From the long line out, and the heavy water, I could not tell whether the fish was on or not, but the line looked greatly chafed all along.

I now tried the only plan to end the business ; leaving my man holding the rod, I went to a bridge some distance up the river, and having crossed to the other side and come down opposite him, he pitched the rod over to me ; I felt that, if he was still on, I was sure of him, and reeling steadily up the 80 yards which were out, I followed down to the big round pool below, where, to my surprise, I became aware that he was still on. He made but a feeble resistance, and after a fight of two hours and forty minutes, we got the clip into as gallant a fish as ever left the sea—weight, 19½ lbs., and new run. The last hour and a half was in a roaring white flood. The fly was, as you may imagine, well “chawed up.”

The neighbourhood of Invererne to the basin of the Findhorn—the resort of innumerable wild-fowl ; the sand hills of Culbin, so curious, almost so marvellous ; the “Black Forest,” stretching away behind Brodie and Dalvey ; the “Old Bar,” where the seals love to sun themselves on the sand ; the mouth of the Muckleburn, the favourite haunt of the otter—made it a most desirable residence for a naturalist and sportsman like St. John. It was there he filled the bag of various game for me which he describes in

"Wild Sports" (p. 277), and which he announced to me almost in the same terms in a letter I have still preserved. It was from Invererne, at a later time, he wrote to me—"I can soon make out a chapter for every month of the year, in the shape of letter or journal, so as to form a volume,"—an intention which he partially carried out under the title of "Field Notes of a Naturalist," and the materials for which, on a more complete scale, are comprised in the present volume.

It was at Invererne that he first took into his service old Rennie as a keeper, who figures in his books and notes as "Donald." Some of the qualities he ascribes to Donald are imaginary, or belonged to some predecessor of Rennie, perhaps a Sutherland highlander. But the old man has some of "Donald's" characteristics strongly developed. To shoot flying was not much in his way; his master could do that pretty well for himself. He was no dog-breaker either. I fear he preferred a dog who could help to kill as well as find game. But he had some countervailing merits in his master's eyes. He was well acquainted with the habits of wild-fowl, and could take you up to swans or wild geese when the ground seemed impossible. The otters were his own children; he could tell you their out-goings and in-comings as if by intuition. Then he was patient of cold and wet, and fatigue, and long watching, and was a most useful slave, if not a director of sport. He has fallen into evil days since his master's death. He has only occasional employment, and is apt sometimes to forget a march in pursuit of some favourite chase. I am sure the gentlemen of Moray will not be too severe on the peccadilloes of St. John's old "Donald."

I think it was at Whitsunday 1847 that St. John moved his household to a little villa beside Nairn, where he had the advantage again of friendly neighbours on both sides. It was from that abode that he became so well acquainted with the mosses and lochs about Lochlee, where Harry shot his first swan.

In 1848 and 1849 he spent some time in Edinburgh, making excursions from thence to Newcastle on the one hand, and into Sutherland on the other. From his early residence at Rosehall, Sutherland had always interest with St. John. But no one could live an open-air life on the coast of Moray without being attracted powerfully to the most picturesque outline of the Sutherland shore. The country was then little known. Its mountains, seen across the great Firth, are most peculiar and picturesque in outline, suggesting ideas of great insulated mountains and precipices, of different structure from the continuous ranges of our midland highlands. There were rumours, too, of eagles, land and water eagles, now exterminated elsewhere, still holding their ancient reign there, and it was known that the line of limitation of the breeding of several birds of passage ran through the northern peninsula, which gave it much additional interest with a naturalist, who studied and desired to collect eggs as well as birds. All these things were inducements with St. John, and led to his recording his wanderings across the Moray Firth, in two pretty volumes, which, for some reasons not worth pointing out, have not been so popular as his earlier work. One chapter of that book—a vivid description of hill sport in winter—forms the last chapter of the present volume; another, without date, but which seems to embody his

recollection of life at Rosehall, I have been induced to add as an appendix to this Memoir. In the autumn of 1849 he established his family at "the College" beside Elgin—a most convenient and pleasant residence for a sportsman with a family to educate. The house was large enough, and there was a big wild garden with some great old trees, and surrounded by an old ivy-grown wall, which served as a secure retreat for the pets of himself and his boys. There is a pleasant society in and round the old cathedral city, embracing some men of science and students of nature, with whom St. John soon became a favourite. The children had the advantage of good schools ; and for sport and the study of the habits of animals, was there not the Loch of Spynie, and the rocks of Covesea, where the peregrine breeds ! St. John's enjoyment of his Elgin residence was much increased by his friend and companion in sport, Captain Gordon Cumming, or later, Major Gordon Cumming, having a house in the neighbourhood.

His life at Elgin was indeed, I believe, very happy. His letters were full of active pursuits, with now a fair mixture of literary work. All his talents were turned to account. No walk or drive but furnished a note on his favourite study. He no longer complained that he was an idle man.

I sometimes visited him at the "College," and used to admire, perhaps a little to envy, his manner of living among his children. The boys were the constant companions of his sport when school permitted, and sometimes the school-master was forgotten when the car came to the door to take papa and Rennie to the Loch. Then, on return, there were the contents of the game-bag to examine—rare speci-

mens to note, and sometimes to preserve and stuff after Mr. Hancock's directions, who was a great friend and ally of old and young. In the evening the drawing-room table was a pretty sight. Some rare bird, or if no rarity offered, a good, handsome, old blackcock was displayed *en pose* for the artists, and father and children made studies in water-colours of a head, a claw, or a tail of the fine bird. Without pretending to much skill in art, St. John drew easily and coloured dexterously what was placed before him, and he made all his children able to do the same. I remember with what pride he showed me the journals sent him by Harry on his first voyage in Admiral Seymour's ship, where the young middy described the places he visited as well as he could, and supplied defects by views drawn on the margin.

St. John spent some happy years at Elgin, and his friends looked forward to many days of life and enjoyment for one so vigorous and active, and of most temperate and healthy habits; but this was not to be. He had been for a long time subject to violent attacks of nervous headache, quite disabling him for any exertion; but these were of short duration, and we little thought that they might be symptomatic of some cerebral affection, as it seems they were. He had one of the worst of those overpowering headaches in the beginning of December 1853, but in a few days he had apparently thrown off the disease, and on Tuesday, 6th December, was on his way out to shoot when he was struck down by paralysis of the whole left side. He was carried home quite powerless, assisted by Major W. Pitcairn Campbell, 23d Fusiliers, but retaining his senses entire. In the midst of overwhelming grief for such

a calamity, Mrs. St. John and the whole family did what their strength allowed to alleviate his sufferings, but it required a man's strength to move the helpless sufferer, constantly requiring change of posture ; and he owed much of what rendered life supportable, for some weeks, to the untiring and tender care of his friend Major Gordon Cumming.

He never recovered the use of his limbs, but his health was so far restored as to allow of his trying a change of air and scene. He moved to Brighton, and afterwards to Southampton, without deriving much benefit from medical treatment or change of climate. His heart still clung to the scene of his youthful sport, and to the last he indulged the hope of returning "to some place between Spey and Ness," but in vain. He died at Woolston, near Southampton, on the 12th July 1856.

He was buried in the Southampton cemetery. At his feet, within his coffin, was placed, by his own desire, the skull of "Leo," a favourite retriever, "Grip's" successor.

Of the many amiable qualities which endeared him to his family and his personal friends I must not speak. I may be allowed to point out for imitation the extreme care and accuracy of his observations of nature—a rare merit—and his guarded and simple statements of the results. His taste for rural pleasures, his love of sport, and his natural unaffected style, will long endear his memory to naturalists.

C. INNES.

APPENDIX TO MEMOIR.

LIFE AT ROSEHALL.

IN my sporting excursions I frequently prefer being alone, and independent of either friend or keeper; not from any disinclination to the society of my fellow-men—far from it—but from a liking to watch and observe the habits and proceedings of many of the living animals of the country. Now one's friend may become bored by being carried off from his shooting, and being hampered by the movements of another person whose attention for the time being is taken up in following some bird or beast not included in the game-book, and therefore not deemed worthy of notice during the shooting season. If my own larder or that of my friend is in want of replenishing, I can fill it as well and quickly as most people; but at other times I like to take my shooting quietly. In deer-stalking the solitary sportsman has often great advantages, though his enjoyment of the sport is much enhanced by the thought that he has some friend, some "*fidus Achates*," to whom he can relate the incidents of the day, and who, following the same pursuits, will enjoy and appreciate the account of the pains and fatigues he has undergone before bringing down the noble animal whose horns he exhibits in triumph. Much of my deer-stalking time was spent alone, or at most with no companionship save that of an ancient and experienced Highlander, or a chance visitor—some travelling laird or sportsman—who was as glad to receive as I was to give provend and rest for himself and horses. From these circumstances I got into the habit of sketching off an account of my day's wanderings, when they had been of that kind that I felt I might say to myself "*forsan et hæc olim meminisse juvabit*."

I had more than once seen in a particular corrie, or not far from it, a remarkably fine stag: his horns, though not peculiarly long, were heavy and large, with ten points well and evenly set on, of a dark colour, and the points as white as ivory. The animal himself was evidently of very great size and age, and in fine condition. He lived quite alone, and did not seem to associate with any of the other deer who frequented that district, although I once saw him rise and

trot off, warned by the movement of a herd of hinds; and at another time he rose unexpectedly on my firing at two stags in a corrie; still on neither of these occasions, nor at any other time, did he appear to be lying in company with the other deer, although not above half a mile from them, nor did he join them in their flight when moved. Instead of this he invariably trotted off sulkily; and if I chanced to fall in with his track again, it was still solitary, and speeding in a direct course over bog and hill to some far off mountain glen or corrie. The shepherds, who generally gave me notice of any particularly fine stag they might see in their rounds, distinguished this one by a Gaelic name signifying the big red stag, as, besides his other attributes, his colour was of a peculiarly bright red. Donald and I had made an unsuccessful raid or two into "the red stag's" country, some unforeseen circumstance always warning him of our neighbourhood too soon: besides which he had a troublesome habit of suddenly rising in the most unaccountable manner from some unexpected corner or hollow. We might examine long and carefully the whole face of a hill, and having made ourselves perfectly sure that nothing larger than a mountain hare could be concealed on its surface, up would rise "the red stag" from some trifling hollow, or from behind some small hillock, and without looking to the right or left, off he would go at his usual trot, till we lost him in the distance.

Another time, after we had beat, as we imagined, a whole wood, so that we were convinced that neither deer nor roe could have been passed over, up would get the stag out of some clump of larch or birch apparently scarcely big enough to hold a hare. Or else he would rise at the very feet of one of the beaters, and though not above a hundred yards from the corner where I was posted he always managed to turn back, perhaps almost running over some man who had no gun: but he invariably escaped being shot at, excepting on one occasion, when I placed a friend who was with me near a pass by which the stag sometimes left a favourite wood. I had stationed the shooter at the distance of half a mile from the wood, as the deer was always most careful of himself, and most suspicious of danger, when he first left the cover. On this occasion, according to my friend's account, the great beast had trotted quickly and suddenly past him at eighty yards' distance, and took no notice of the barrels discharged at his broadside, though fired by a very good shot, and out of a first-rate Manton gun that carried ball like a rifle. My friend could not account for missing him; but missed he evidently was.

I determined one day to start off alone in pursuit of this stag,

and to pay no attention to any other deer I might see during my excursion. Donald's orders were to meet me at a well-known rock, about eight miles from home, the next day at two o'clock ; my intention being, in the event of my not returning the same night, to work my way to a distant shepherd's house, and there to sleep. Donald had directions as to the line by which he was to come, that he might not disturb one or two favourite corries ; and he was also to bring a setter and my shooting apparatus, as I took with me only a single-barrel rifle and a few bullets. I did not take Bran, as, being alone, I could not be quite sure that he would not be in my way when getting up to the deer, if I should find him ; but I took a dog of a very different kind—a powerful bulldog, who was well accustomed to deer-stalking, and who would lie down for an hour together if commanded, without moving an inch.

On leaving the house at daybreak, or at least before the sun was risen, I struck off in a straight line through the woods, till, having got through the whole cover, I sat myself down on the top of what was called the Eagle's Craig, and turned, for the first time that morning, to the east to look at the sun, which was now rising in its utmost glory and brightness,—a glorious sight, and one that loses not its interest though seen each returning day, particularly when viewed from the lonely places either of land or sea : below me lay a great extent of pine-wood, concealing the house and the cultivated land around it, with the exception of a glimpse caught here and there of the bright green meadow which formed the banks of the river. The river itself was visible through many openings, and where the outline of the trees was lower than in other places : beyond the river rose a black moorland, which, growing gradually higher and higher, terminated in mountains with a most varied and fantastic outline of peaks and precipices, the stony sides of which were lighted up by the rising sun, and exhibited a strong contrast to the deep colour of the hills below them, covered with dark heather, and not yet reached by the sun's rays.

On the other side the ground was of quite a different character : immediately on leaving the wood, the country for some distance had a dreary, cold look, being covered not with heather, but with a kind of gray grass, called there deer's grass, which grows only in cold swampy ground. Here and there this was varied by ranges of gray stone and rock, and dotted with numerous lochs. In the distance to the west I could see the upper part of a favourite rocky corrie, the sun shining brightly on its gray rocks : a little to my right the fir-woods terminated, but on that side, between me and the river, of which every bend and reach was there in full view, were numerous

little hillocks overgrown with birch trees, old and rugged : here and there, amongst these hillocks, rose a great round gray rock, and the whole of this rough ground was intersected with bright green glades. Some three miles up the river a blue line of smoke ascended perpendicularly in the still morning, the chimney it came from being concealed by a group of birch trees.

I looked carefully with my glass at all the nooks and grassy places to see if any deer were feeding about them, but could see nothing but two or three old roe. A moment after a pair of young roe walked quietly out of some concealed hollow, and after gazing about a short time and having a game of romps on the top of a hillock, were joined by their mother, and then all three came into the woods at the foot of the craig where I was sitting. The grouse were calling to each other in all directions, and every now and then an old cock-bird would take a short fly, crowing, to some stone or hillock, where he stood and sunned himself. I was struck just then by the curious proceedings of a mountain-hare, who had been feeding about two hundred yards from me ; she suddenly began to shew symptoms of uneasiness and fear, taking short runs and then stopping, and turning her ears towards the hill-side behind her. I soon saw the cause of her alarm in a beautiful marten cat : the latter, however, having probably already made her morning meal, took little notice of the hare, but came with quiet leaps straight towards me. As I was well concealed amongst the gray fragments of rock which covered the top of the craig, and which were exactly the same colour as the clothes I was dressed in, the little animal did not see me. When about thirty yards off she suddenly stopped and looked in my direction, having evidently become aware, through some of her fine senses, of the vicinity of an enemy. She offered me a fair shot, and, well aware of the quantity of game killed by these animals, I sent a rifle-ball right into her yellow chest as she sat upright with her head turned towards me.

But time advanced, so I delayed no longer, and started off in a westerly direction. Many a weary mile did I tramp that day without seeing anything but grouse, and an occasional hare. Nevertheless I saw many fresh tracks of red deer : particularly crossing one mossy piece of ground, where there appeared to have been at least twenty or thirty deer, and amongst them one or two large stags. In one place I saw a solitary track of a noble stag, but it was two or three days old. I judged that the herd whose tracks I saw had a good chance of being in or about a corrie, of which I should get a view from the next height ; but after a long and tiresome survey of the ground I could see no living creature, excepting a heron, who

was standing in his usual disconsolate attitude on a stone in the burn that ran out of the corrie, adding by his very presence to the solitude of the scene. "I don't understand where these deer can be," was my internal ejaculation, "but here they are not; so come on, good dog." Another and another height did I pass over, and many a glen did I scan inch by inch till my eyes ached with straining through the glass: nothing could I see, and I began to think to myself that as it was past two and the shepherd's house was some three hours' walk off, I had better turn in that direction; so slanting my course a little to the north, I pulled my plaid round me and walked on. In deer-stalking, as much as in the every-day pursuits of life, the old adage holds good—

credula vitam
Spes fovet;

and this said hope carries the weary stalker over many a long mile. I came in half an hour to a large extent of heather-covered ground, interspersed with a great number of tumulus-shaped hillocks. I was looking carelessly over these, when my eye was suddenly attracted by a red-coloured spot on one of the mounds. I turned the glass upon it, and at once saw that it was a large bright-coloured stag with fine antlers, and altogether an animal worth some trouble. He was in a very difficult situation to approach. He commanded a complete view of the face of the hill opposite to him, and over the summit of which I was looking, and I was astonished he had not observed me, notwithstanding all my care. As the wind blew, I could not approach him from the opposite direction, even if I had time to get round there before he rose; and I knew that once on foot to feed, his direction would be so uncertain amongst the mounds, that my chance would be small.

After a short survey I started off at my best pace to the right, thinking that from the nature of the ground I might succeed in getting into the valley unobserved; and once there, by taking advantage of some hillock, I should have a tolerable chance of approaching him. After what appeared to me a long tramp, I came to a slight rise of the shoulder of the hill: beyond this was a hollow, by keeping in which I hoped to get down unobserved. It was already past three, but the stag had not yet moved; so, keeping the tops of his horns in view, I began to crawl over the intervening height. At two or three places which I tried, I saw that I could not succeed. At last I came to a more favourable spot; but I saw that it still would not do, however well the dog behaved, and a capital stalker he was, imitating and following every movement of

mine, crouching when I crouched, and crawling when I crawled. I did not wish to leave him quite so far from the deer, so I made another cast, and this time found a place over which we both wriggled ourselves quite unseen. Thank heaven! was my exclamation, as I found myself in a situation where I could stand upright again. Few people excepting deer-stalkers know the luxury of standing upright, after having wormed oneself horizontally along the ground for some time. There were the horns with their white tips still motionless, excepting when he turned back his head to scratch his hide, or knock off a fly. I now walked forward without stooping till I was within three or four hundred yards of him, when I was suddenly pulled up by finding that there was no visible manner of approaching a yard nearer. The last sheltering mound was come to; and although these mounds from a distance looked scattered closely, when I got amongst them I found they were two or three rifle-shots apart at the nearest. There was one chance still: a rock or rather stone lay about eighty yards from the stag, and it seemed that I might make use of this as a screen, so as, if my luck was great, to get at the animal. I took off my plaid, laid it on the ground, and ordered the dog to lie still on it; then buttoning my jacket tight, and putting a piece of cork, which I carried for the purpose, into the muzzle of my rifle to prevent the dirt getting into it, I started in the most snake-like attitude that the human frame would admit of. I found that by keeping perfectly flat, and not even looking up once, I could still get on unobserved. Inch by inch I crawled: as I neared the stone my task was easier, as the ground sank a little and the heather was longer. At last I reached the place, and saw the tips of his horns not above eighty yards from me. I had no fear of losing him now; so, taking out the cork from my rifle, I stretched my limbs one by one, and prepared to rise to an attitude in which I could shoot; then, pushing my rifle slowly forward, I got the barrel over the stone unperceived, and rose very gradually on one knee. The stag seemed to be intent on watching the face of the opposite hill, and, though I was partially exposed, did not see me: his attitude was very favourable, which is seldom the case when a stag is lying down; so, taking a deliberate aim at his shoulder, I was on the point of firing, when he suddenly saw me, and, jumping up, made off as hard as he could. He went in a slanting direction, and before he had gone twenty yards I fired. I was sure that I was steady on him, but the shot only seemed to hurry his pace; on he went like an arrow out of a bow, having shewed no symptom of being hurt beyond dropping his head for a single moment.

I remained motionless in despair: a more magnificent stag I had never seen, and his bright red colour and white-tipped horns shewed me that he was the very animal I had so often seen and wished to get. He ran on without slackening his pace for at least a hundred yards, then suddenly fell with a crash to the ground, his horns rattling against the stones. I knew he was perfectly dead, so, calling the dog, ran up to him. The stag was quite motionless, and lay stretched out where he fell. I found on opening him that the ball had passed through the lower part of his heart—a wound I should have imagined sufficient to have deprived any animal of life and motion instantaneously. But I have shot several deer through the heart, and have observed that when hit low they frequently ran from twenty to eighty yards. If, however, the ball has passed through the upper part of the heart, or has cut the large blood-vessels immediately above it, death has been instantaneous, the animal dropping without a struggle.

Having duly admired and examined the poor stag, not without the usual compunction at having put an end to his life, I set to work bleeding and preparing him for being left on the hill till the next day, secure from attacks of ravens and eagles; then, having taken my landmarks so as to be sure of finding him again, I started on my march to the shepherd's house, looking rather anxiously round at the increasing length of my shadow and the diminished height of the sun; as I had to pass some very boggy ground with which I was not very well acquainted. I had not gone a quarter of a mile, however, when I saw the shepherd himself making his way homewards. I gave a loud whistle to catch his attention, and, having joined him, I took him back to shew the exact place where the stag was lying, to save myself the trouble of returning the next day. Malcolm was rather an ally of mine, and his delight was great at seeing the stag.

"'Deed, aye, Sir; it's just the muckle red stag himsel'; mony a time I've seen the bonny beast. Save us! how red his pile is!"

"Yes, he is a fine beast, Malcolm; and you must bring your gray pony for him to-morrow. I must have the head and one haunch down to the house: take the rest to your mother; I dare say she can salt it."

I knew pretty well that this good lady must have had some experience in making red deer hams, unless Malcolm was very much slandered by his neighbours; nevertheless he had promised me not to poach on my ground, and knowing that I trusted quite to his honour, I believe that he neither did so himself nor allowed any one else to do so.

"You are ower good, your Honour; and the mither will be glad of a bit venison; it's a long time now since I killed a deer."

"When was the last, Malcolm?" I asked.

"Ou, mony a day sine, Sir; but, to tell the truth, it is only yesterday since I fired at one."

"And where was that, Malcolm?"

"Why, if your Honour wants to know, and I am sure you will do no ill turn to a lad for taking a shoot, I'll just tell you."

I could not help smiling at Malcolm's describing himself as a lad. He stood six feet three inches without his shoes, and a perfect giant in every proportion, but strong and active withal, and a capital stalker, being able to wind his great body about through moss and heather in a manner that was quite marvellous. Malcolm's account, then, was, that a shepherd on an adjoining property, or rather on one divided from where we were by a long lake, had asked him to come up some evening with his gun to "fleg" some deer that had been destroying his little crop of oats. Well, Malcolm had gone; and the evening before I met him he had fired in the dusk at a stag with a handful of large slugs; the deer was hit and crippled, but had thrown out the colley dogs, which had pursued him, by taking to the water and apparently swimming the loch. If he had managed to cross he must be on my side of it, and I might by chance fall in with him on my return home the next day in some of the burns and glens through which I should have to walk. I did not blame Malcolm much, knowing the mischief done by deer to the shepherds' little crops; besides which the ground where he had shot this stag was not preserved or used as a forest by the owner.

We had a weary walk, though enlivened by Malcolm's conversation. Without his company and guidance I should have had some difficulty in finding my way through the rough ground over which we had to pass. The night, too, had come on quite dark before we reached the shealing.

On entering I was much struck by the group which we saw by the light of several splinters of bog-fir laid on a stone. Malcolm's old father, a man whose years numbered at least four-score, was reading a chapter of the Bible in Gaelic to the rest of his family, which consisted of his wife, a woman of nearly equal age to himself, but hale, neat, and vigorous, and of a sister and brother of Malcolm's; the former a peculiarly pretty, though somewhat extensive damsel; and the latter a giant like Malcolm himself, equally good-looking, and equally respected in his own rank of life. The old man having looked off his book for a moment, without pausing in his reading,

continued his chapter. Following Malcolm's example, I took off my cap, and sat down on a chest in the room, and though of course not understanding a word of what was read, I was struck by the appearance of real devotion and reverence of the whole group, and looked on with feelings of interest and respect till he came to the end of a somewhat lengthy chapter. This finished, the old man, resting his head on his hands, which his long gray hair entirely covered, uttered a short prayer in the same language. The moment this was done he handed the Bible to his daughter, who, wiping it with her apron, deposited it in a chest. I was then welcomed with great kindness, and preparations were made for Malcolm's and my supper, which consisted of tea, oatcake, eggs, and part of a kippered trout, caught in a stream running out of the large loch, and which when alive must have weighed at least twelve pounds: such cream and milk, too, as are met with, or at any rate enjoyed, only in the Highlands. With real politeness the old people talked to me but little during the meal, seeing that I was tired and hungry; but over the glass of capital toddy which succeeded the tea I had many a question to answer respecting the killing of the stag, etc. The old lady spoke very little English, but understood it well enough. The old shepherd listened with great interest, the more so from having been a somewhat famous stalker in his own time, and now a great lamenter of the good old time when deer and black cattle were more plentiful, and sheep comparatively few to what they are in the present day.

Before the earliest grouse-cock had shaken his plumage, and called his mate from her heather couch, I had left my sleeping-place in the building that did duty for a barn, where deep in the straw, and wrapped in my plaid, I had slept sound as a deerstalker, and I fancy no person sleeps more soundly. I had preferred going to roost in the clean straw to passing the night within the house, knowing by former experience that Malcolm's shealing was tenanted by myriads of nocturnal insects, which, like the ancient Britons, "*feri hospitibus*," would have left me but little quiet during the night. The last time I had slept there, all the fleas in the shealing, "*novitatis avidi*," had issued out and fallen on the body of the unlucky stranger. Tempted by the clean and fresh appearance of the good lady's sheets, I had trusted my tired limbs to their snowy whiteness, when, sallying forth from every crevice and every corner, the legion of insects had hopped on me, to enjoy the treat of a supper of English blood. The natives of these places seem quite callous to everything of the kind.

To continue, however. After making good use of the burn that rippled along within fifty yards of the house, and having eaten a

most alarming quantity of the composition called porridge, I sallied forth alone. Malcolm and his brother would fain have accompanied me, but the latter had to attend some gathering of sheep in a different direction, and Malcolm was obliged to go for the stag killed yesterday. He therefore only walked a few hundred yards up the first hill with me, in order to impress well on my recollection the different glens and burns he wished me to look at on my way to the place of rendezvous with old Donald. The sun was but a little distance above the horizon when I gained the summit of a tolerably long and steep ascent immediately behind Malcolm's house. A blackcock or two rose wild from some cairn of stones or hillock, where they had been enjoying the earliest rays of the sun, and flew back over my head to take shelter in the scattered birch thickets near the shealing; and here and there a pack of grouse rose, alighting again before they had flown a hundred yards, as if fully understanding that grouse shooting was not the order of the day, and, strutting along with their necks stretched up, seemed to care little for my presence. The ring-ousel flitted from rock to rock, uttering its wild and sweet note. Truly there is great enjoyment gained by the early riser; everything in nature has a pleasant aspect, and seems happy and thankful to see the light of another sun.

The great mountain to the west looked magnificent as its gray corries and cliffs were lighted up by the morning rays. A noble pile of rock and heather is that mountain, and well named Ben Mhor, or the Big Mountain—not a triton amongst minnows, but a triton amongst tritons. The golden eagle, to add grandeur to the scene, was sweeping through the sky high above me, and apparently eyeing my canine companion with mingled curiosity and appetite. Once or twice in his circles he came so near that I was half inclined to send a rifle-ball at him, but as often as I stopped my walk with this intention, the noble bird wheeled off again, and at last, remembering his breakfast hour was past, flew off in a straight line at a great height towards the loch to the north of us, where he probably recollected having seen some dead or sickly sheep during his flight homewards the evening before.

I had several hours to spare before the time of meeting Donald, so I diverged here and there, wherever I thought it likely I should find deer, and then kept a northerly course in order to look at some burns and grassy ground near the loch, according to Malcolm's advice. The loch itself was bright and beautiful, and the small islands on it looked like emeralds set in silver. With my glass I could distinguish eight or nine wild geese, as they ruffled the water in their morning gambols, having probably just returned from graz-

ing on the short green grass that grew on different spots near the water's edge. These grassy places were the sites of former habitations, and were still marked by the line of crumbled walls, now the constant resort of the few wild geese that breed every year on the lonely and unvisited islands of the loch.

Below me there was a capital flat for deer, a long sloping valley with a winding burn flowing through the middle, along the banks of which were grassy spots where they constantly fed. I searched this long and carefully with my glass, but saw nothing excepting a few small companies of sheep which were feeding in different flocks about the valley. So famous, however, was this place as the resort of deer, that I took good care not to shew myself, and crawled carefully into a hollow run, which, leading to the edge of the burn, would enable me to walk almost unseen for a long distance, and I thought that there might still be deer feeding in some bend of the watercourse, where they had escaped my search. Before I had walked many hundred yards down the course of the burn, I saw such traces as convinced me they had been feeding there within a few hours ; so, arranging my plaid and rifle, I walked stealthily and slowly onwards, expecting to see them every moment. The nature of the ground was such that I might come on them quite unperceived ; the dog too shewed symptoms of scenting something, putting his nose to the tracks and then looking wistfully in my face, watching every movement of my rifle. The inquiring expression of his face was perfect : whenever I stopped to look over or around some projecting angle of rock, he kept his eyes fixed on my face, as if to read in it whether my search was successful or not. A deer-stalker in the situation I was in would make a good subject for a painter. I wound my way silently and slowly through the broken rock and stone which formed the bed of the burn, shewing in their piled-up confusion that the water must at some times rage and rush with the fury and power of an Alpine torrent, though now it danced merrily along, rippling through the stones and forming tiny pools here and there where it had not strength enough to break through the accumulated sand and gravel which dammed up its feeble stream. Dressed in gray, and surrounded with gray stone on every side, I was as little conspicuous as it was possible to be, and there was just enough ripple in the stream and its thousand miniature cascades to drown the sound of my footsteps, whenever I inadvertently put my foot on any stone that grated or slipped below me. The only thing that annoyed me was an occasional sheep that would see me from the bank above, and by running off in a startled manner was likely to warn the deer, if there were any ahead of me, of the vicinity of an

enemy. I had continued this course for some distance, when just as I began to turn off in order to cross the valley to look over the next height, and had made up my mind that the deer whose recent traces I had seen must have slipped away unobserved,—just then, on turning a corner, I caught a momentary glimpse of the hind quarters of one of the wished for animals walking slowly round a turn in the burn. I stopped, fearing they had seen or heard me, and I expected to see them leap out of the hollow and make away across the valley ; but not seeing this happen, I walked carefully on, and came in view of nine deer, hinds and calves, who were feeding quietly on a little piece of table-land close to the burn. I also saw the long ears of another appearing beyond and above the rest, evidently being on the look-out. They seemed to have no suspicion of an enemy, and when they stopped to gaze about them their heads were turned more towards the plain around than to the course of the burn. The sentry too was seemingly occupied with looking out in every direction excepting where I was. They were not more than two hundred yards off, and I judged that by advancing quickly the moment that they turned the next corner, I should be able to get unperceived within forty or fifty yards. The single hind had disappeared too, having gone over a small rise. I put on a new copper cap, and felt sure of an easy shot : the dog, though he did not see the deer, perfectly understood what was going on, and seemed afraid to breathe lest he should be heard. Amongst the herd were two fine barren hinds, both in capital condition. I did not care which of the two I might kill, but determined to have one, and was already beginning to reckon on Donald's delight at my luck in getting a fine hind as well as the stag I had killed yesterday. All the hinds had now gone out of sight, and I moved on. At that very moment the sentry hind, a long-legged, ragged, donkey-like beast, came back to the mound where she had been before, and her sharp eyes instantly detected me. Never did unlucky wight, caught in the very act of doing what he least wished should be known, feel, or, I dare say, look so taken aback as I was. I stood motionless for a moment, hoping that even HER eyesight might be deceived by my gray dress, but it was too late ; giving a snort of alarm, she was instantly out of sight. I ran forwards, trusting to be in time for a running shot at some straggler, and came in view of the whole troop galloping away, a tolerably long shot off, but still within range, and affording a fair broadside mark as they went along in single file to gain the more level ground. I of course pulled up, and took a deliberate aim at one of the fat hinds. She afforded me a fair enough chance, but I saw, the moment I pulled the trigger,

that I had missed her. The ball struck and splintered a rock, and must have passed within a very few inches of the top of her shoulder. I saw my error, which was that, miscalculating the distance, I had fired a little too high. However, it was too late to remedy it ; so I stood quietly watching with a kind of vague hope that my ball might have passed through her shoulder, though in reality I was sure this was not the case. They never stopped till they reached the very summit of one of the heights that inclosed the valley, and then they all halted in a group for two or three minutes, standing in clear and strong relief against the sky. After looking back for a short time towards the point of alarm, they disappeared over the top of the hill, and I reloaded my rifle, and then went to examine the exact spot where my ball had struck. Judging from the height it was from the ground, I saw the hind had had a very narrow escape, and muttered to myself "Not a bad shot after all, though unlucky ; well, I'm glad it was not a fine stag—never mind the hinds." It's pleasant to find consolation—"rebus in adversis ;" my dog in the meantime scented about a good deal, and seemed to wonder that I had missed.

I now turned off out of my stony path, and walked across a long tract of easy ground. There were several likely spots in my way, but no deer were to be found ; and an hour before my time I arrived at the trysting-place, which was a peculiarly-shaped large rock, standing in the midst of a great extent of ground covered with gray stones, and rocks of a similar description, but all much smaller. The rock itself rejoiced in a Gaelic name signifying the "Devil's Stone." It was a curious spot,—a wide and gentle slope of a hill perfectly covered with these gray stones, looking as if they had dropped in a shower from the clouds. They ended abruptly near the foot of the hill, and formed almost a straight line, as if some giant workman had done his best to clear the remainder of the slope, and had picked all the stones off that part, as farmers do off a grass field. Upwards, towards the top of the hill, they increased, if possible, in number, and the summit appeared like one mass of rock. Through all this desolation of stone there were several strips of heather, or withered-looking grass, not much wider, however, than foot-paths. These served as passes for any sheep and deer which might fancy journeying through them.

I reached my point of rendezvous, and sat down to wait patiently for Donald, with my face turned in the direction whence he was to arrive. I knew that, unless detained by any quite unforeseen accident, he would arrive rather before than after his time,

as he was to bring me something in the shape of luncheon ; the liquid part of which I was confident he would not forget.

I waited some time in this solitude, without hearing or seeing any living creature to enliven the dreary landscape before me, with the exception of a pair of ravens who passed at no great height above me, uttering their harsh croaks of ill omen as they winged their way in a direct course, to feast on the remains of some dead sheep or deer.

My attention was suddenly roused, however, by hearing a couple of shots in quick succession, the sound coming from the direction in which I expected Donald. As the reports did not appear to be at any great distance, I rose with the intention of going to meet him ; though I could not understand what he was shooting at, it being quite against both his and my ideas of propriety that he should hunt the very ground over which I intended to beat homewards. On second thoughts, I fancied that he had fired off his gun to warn me of his approach ; but, just as I was passing these things over in my head, I saw a stag of good size come in view from the direction in which I had heard the shots. Down I dropped instantly behind a rock, as the deer was coming straight towards me. As he approached, I saw that the poor beast was hard hit. One of his forelegs was broken, and swinging about in a miserable manner, and he had also one of his horns broken off a few inches above his head ; altogether he seemed in a most pitiable state. Before he came within two hundred yards of me he turned off, and I watched him as he scrambled along on three legs painfully and slowly, stopping frequently to look back, or to smell at the blood that was trickling down his sides. I could plainly see that he was also struck somewhere about the middle of his body, as well as on the horn and leg, and was now bleeding fast. It then occurred to me that Donald had fallen in with a lame stag, and had thought it best to do what he could towards killing him with my gun. Bullets he always took with him by my orders. The stag continued his painful march, and I would have given much to have been within reach to put an end to the poor brute's misery. He twice lay down on a grassy spot amongst the rocks, having first looked anxiously and fearfully round him ; but seemingly the attitude of lying was more painful to him than moving slowly on. I remembered then a theory of Donald's, that a deer never lies down when shot through the liver, but continues moving, or at any rate standing, till he dies. How far this opinion was correct I never had a good opportunity of proving. The deer before me, having found that lying down gave him no relief, continued moving, but still slowly and with evident difficulty. Once

he stopped and stood in a pitiful attitude, trembling all over, and moving his head up and down as if oppressed with deadly sickness. After this he seemed to recover slightly, and, standing erect, gazed with care and anxiety in every direction ; then, as if determined to make one more effort for his life, set off in a broken trot. He had been winding about amongst the rocks all the time I had been watching him, seldom more than two hundred yards from me, and sometimes so near that I was half tempted to try a shot at him ; but I was always in hopes of getting within surer range, and did not fire. He now trotted off about three hundred yards, where there was a small black pool of water. Into this he went ; it did not at first reach higher than his knees. Just then Donald appeared in view, coming slowly and cautiously over the hill, and leading a pointer in a string. I saw that the dog was tracking the deer. It was a large powerful dog, of great size and strength—one of the finest, if not quite the finest built dog of the kind that I had ever possessed or seen. Having been at the death of one or two deer, he had taken a mighty fancy to the scent of a bleeding stag, and tracked true and keenly. I sat quiet to watch him and the old Highlander, as they came slowly but surely on the track, with both their noses to the ground ; Donald hunting low, in order to be sure that the dog was still right, which he could tell pretty well by the occasional spots of blood on the gray stones, though the ground was too hard most of the way to show the mark of the foot. Now and then they seemed quite thrown out for a minute or so ; this I saw was generally occasioned by Donald's want of judgment : the dog, though he strained on the string, kept the track wonderfully well in every turn. The poor object of their chase, when he first saw his enemies appear, gave a sudden start, and seemed inclined to make off ; but on second thoughts he stopped short again, and, lowering his head and neck, crouched in the water, as if trusting to the surrounding rocks for concealment ; and there the poor animal remained, with stooping horns, perfectly motionless, but evidently with every nerve and sense on the alert, listening for the nearer approach of his enemies. For my own part, I became quite interested in watching Donald and the dog ; I knew that the stag was safely ours, as he could not leave the pool without coming into full view, and having to depend on his speed for safety, which in his enfeebled state was the last thing he would like to do. Donald looked anxiously round him sometimes, as if he hoped to see me, and as if he expected to hear my rifle every moment, since he was well aware that our time of meeting was past, and that I was pretty sure not to be far off. When he came near the "Devil's Stone" he checked the dog, and

came to a determined halt, hesitating whether to continue tracking the stag, or to wait for my appearance and assistance ; he took a long look, too, at the country far beyond where the animal really was. It was amusing to see the old fellow, as he sat within eighty yards of me, perfectly unconscious that the stag was so near him, and that I was still nearer. The whole thing, too, shewed the great necessity of always having a good tracking dog out when deer-stalking ; for here was a mortally-struck stag lying concealed, where a dozen men might have passed within a few yards without seeing him. I thought it time to finish the business, and gave a low whistle to warn Donald of my neighbourhood before I stirred, as I thought it not at all unlikely that he would fire blindly at the first moving thing he saw amongst the rocks in his present excited state. He started and stared round him. I saw that the deer only crouched the lower, and would not move ; so, whistling again, I stood up. "The Lord keep us, Sir, but you flegged me just awful !" said Donald. "But did your Honour see a stag come this way ?" I told him that I had, and that he had passed on ; but I did not say how far he had gone. The old man was annoyed in no slight degree at the information ; and on my questioning him how he had got at the deer, etc., he told me that, as he came to meet me, he had seen a crippled stag coming slowly over the ground exactly towards him ; and that having stooped down and loaded the gun he carried as quickly as he could, he had waited till the stag passed within twenty yards of him ; that he then fired both barrels, one at his head and neck ; that one ball had broken off a portion of the deer's horn, while the other had passed through his body, tumbling him over ; but that he had quickly recovered and made off in my direction, and was probably now in the burn over the next hill. "But you are aye smiling, sir ; and I ken weel that you've seen more of the brute than you tell me." I told the old man exactly where he was ; and having made him quite understand the very rock he was behind, I gave him the rifle to finish the work he had commenced, while I sat down with the two dogs in full view of the pool, in order to keep the attention of the stag occupied.

"Now then, Donald take care ; don't be in a hurry, and hit him in the heart or the head."

"No fear, no fear ; if I put out," said Donald, "ye needna mind, the beast is as gude as killed already."

Then taking a prodigious spoonful of snuff to clear his brain, and divesting himself of his gamebag and other encumbrances, he set off. He reached a mound within thirty yards of the stag, and lying flat on his stomach, with his rifle resting on the bank, he aimed long and steadily ; then, with sundry kicks and contortions, screwing

himself into an attitude that pleased him more, he took another aim, and then a good strong pull at the trigger—but in vain, as he had not cocked the rifle. Without taking it off the rest over the bank, he pulled back the hammer and fired instantly, missing the stag entirely. Donald was too astonished to move; but not so the stag, who jumped up and made off—going, however, so stiffly and lamely, that I saw the dogs must bring him to immediately. So I let them go, and in a very short time they had the poor beast on the ground, and were both fixed on him like leeches, the bull-dog on his throat, and the pointer worrying at his shoulder.

“Bravo, Donald!—well missed!” I could not help calling out as I passed him, running as hard as I could to help the dogs. The old man was not long in joining me; and the dogs were soon got off. The stag was bled, and then examined all over to see where he had been struck.

“Deed, Sir,” said Donald, pointing to the rifle, “she is as gleg and kittle to handle as”——

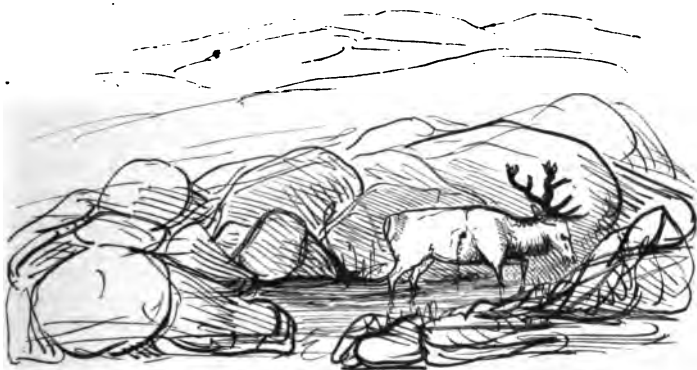
Here he paused as if at a dead loss for a simile; which I was obliged to help him to at last by suggesting, “As your own wife, Donald.” At which he indulged in a low inward chuckle and a pinch of snuff, without, however, denying the “soft impeachment.”

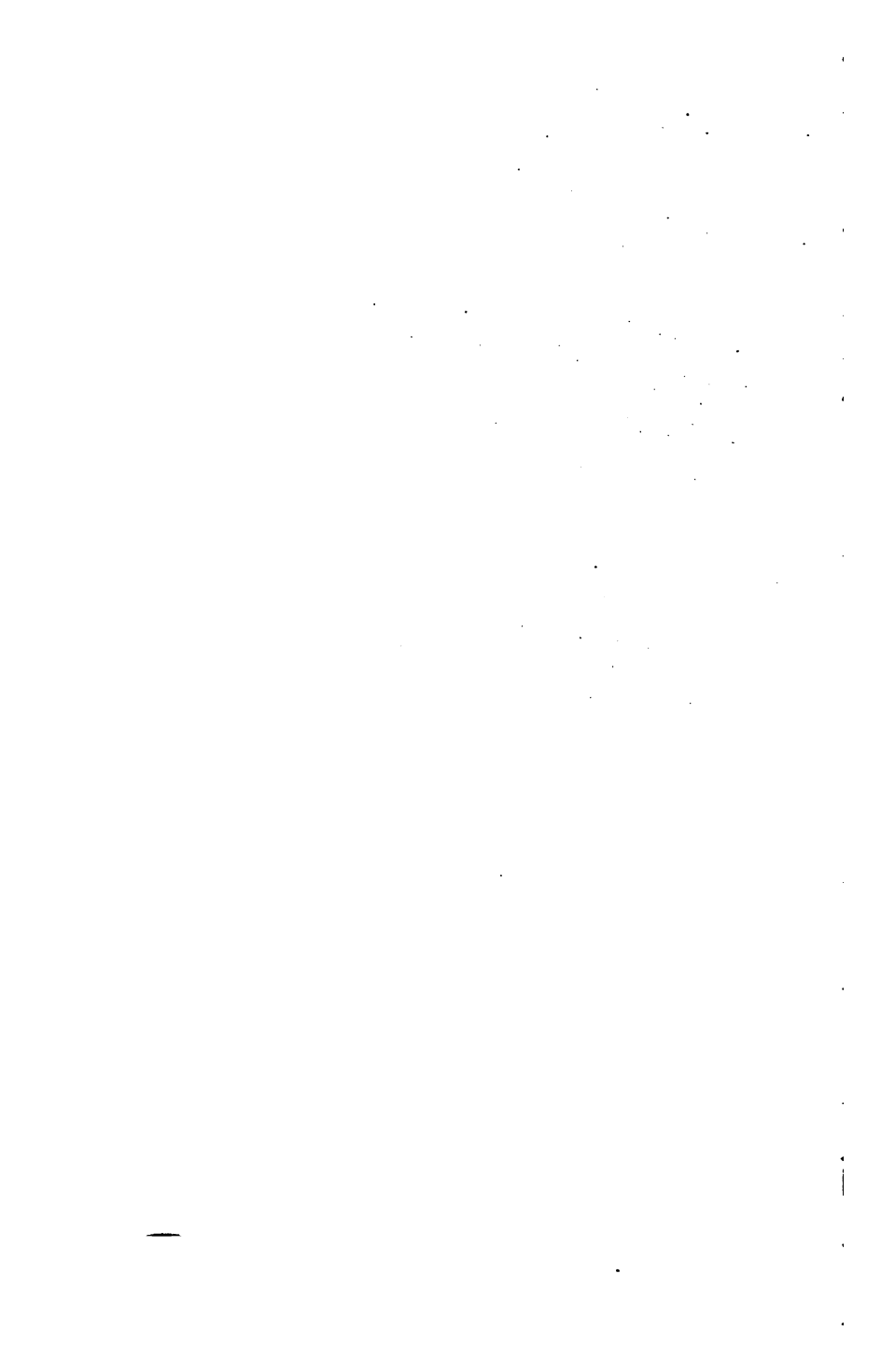
On looking at the stag, we found that he had evidently been very lately shot at, and that one of his forelegs was broken above the knee—the bone smashed entirely, and the leg hanging on by the skin, which would have soon worn through; the animal, having lost the incumbrance of the broken limb, would soon, if left in quiet, have entirely recovered. We prepared our game for being “left till called for,” and sat down to our luncheon. My account to Donald of the death of my other stag was interrupted by a most desperate battle between the dogs, who had fallen out over the dead body; and being pretty well matched in size and courage, we had great difficulty in reducing them to order, and compelling them to keep the peace.

I had a pleasant though not very bloody afternoon's shooting going home, killing seven brace of wild-flying grouse, a mallard, and two blackcocks. The night had set in before we were half way through the woods in which the last two or three miles of our road lay; we could hear numberless owls hooting and calling on the tops of old larch-trees. Everything else was as still as death.

“Deed, Sir, that's no canny!” exclaimed my companion, as an owl with peculiar vigour of lungs uttered his wild cry close to us,

and then flitting past our faces, alighted on the opposite side of the avenue we were walking along, and recommenced his song of bad omen. "If it wasn't so dark, I'd empty the gun into his ugly craig." However, as it *was* so dark, the owl escaped being sacrificed to Donald's dislike this time ; and we soon reached the house, where the comforts of my own dressing-room were by no means unacceptable after so long an absence from razor, brushes, etc.





NOTES
OF
NATURAL HISTORY AND SPORT
IN MORAYSHIRE.

CHAPTER THE FIRST.

JANUARY.

DURING the month of January the wood-pigeons (*Columba palumbus*) commence feeding greedily on the turnips. They do not, in my opinion, dig into the roots with their bills, unless rabbits or rooks have been before them to break the skin of the turnip. In fact the wood-pigeon's bill is not at all adapted for cutting into a frozen and unbroken turnip. The crops of those which I kill at this season are full of the leaf of the turnip; and they appear not to attack the centre or heart of the green leaf, but to eat only the thin part of it. The wood-pigeon feeds more particularly on the leaf of the Swedish turnip, which is more succulent.

Every wood is tenanted by these handsome birds during the breeding season; they frequently form their nest and rear their young in gardens close to houses, putting aside their natural wildness to claim the protection of man; they breed about three times in the season. I have ascertained this by watching some that come every season to breed in my garden, building in the shrubs close to the house, and frequently not above six feet from the ground, where, when sitting, they allow us to pass by them without shewing the least alarm. In the woods they breed in great numbers in trees, in ivy sometimes, in a furze

bush, and in some few instances I have found the nest on the ground. Frequently they build close to the sparrow-hawk, notwithstanding the enmity which exists between these birds; the sparrow-hawk frequently killing wood-pigeons, in spite of the superior weight and size of the latter bird. It is to be supposed that when these two so dissimilar birds build so close together, it is for mutual protection against the hooded crow, who is always searching for eggs. The sparrow-hawk attacks and drives away every crow which may approach, while the wood-pigeon does good service by giving due notice of the enemy. About November the wood-pigeons assemble in immense flocks to feed on the stubble and new-sown wheat. They then roost in great numbers in certain favourite woods, and the surest way of killing a few is to wait under those trees they most frequent in the evening. The sportsman should remain quite motionless for a minute or more after the wood-pigeon has alighted, as for that time the bird is looking in all directions below her for any enemy. After having done this she is not so much on the alert, and the shooter can raise his gun without her taking the alarm. The wood-pigeon feeds also on acorns, beech-nuts, the seed of the wild mustard, and, where it can be obtained, devours great quantities of the *Potentilla anserina*, breaking it off in pieces of about an inch in length. Though, without doubt, a consumer of great quantities of grain, at some seasons the wood-pigeon must feed for many months wholly on seeds of weeds, which, if left to grow, would injure the farmer's crops to a very serious extent. Amongst other seeds which it eats are those of the rag weed. The wood-pigeon not being able to scratch up seed, can only feed on those which lie exposed. It also eats the berries of the ivy, mountain ash, cherries, and strawberries. During snow it feeds on the turnip fields, eating the leaves. I have made many attempts to domesticate the wood-pigeon, but have succeeded only in one or two instances in inducing the birds to remain with me after they had acquired the ring round the neck and their mature plumage. Although they have been as

tame as possible, about that age they wander away or join the passing flocks of their own species. I have never but once seen a wood-pigeon with any variety of plumage. In this instance a wood-pigeon, almost entirely white, has for three winters, and is still (Nov. 1852), feeding on the same fields near Elgin. I have seen this bird quite distinctly through my telescope and examined its plumage, which is pure white with a few marks of the natural colour about the neck and tail. Although there is a great extent of new-sown wheat (Nov. 23) in every direction, I shoot wood-pigeons with their crop full of the seed of the dock, and without a single grain of corn ; they also have in their crops a great deal of the rag weed and small potatoes as large as marbles.

In the garden I see the titmice (*Parus cœruleus*) searching for, and feeding on, the nests and eggs of the common garden spider. The little blue tom-tit is of great service to gardeners as a destroyer of many kinds of insects, which would increase to a most injurious extent without the aid of these prying little fellows, who are seen everywhere and at all seasons. Several pairs always breed in my garden wall ; they line their nests with a great quantity of feathers and other soft substances and lay eight to ten eggs, according to some authors twice that number, though I certainly never saw above ten eggs in a nest. When sitting, the old bird is very tame and bold, attacking the hand which is put into her nest, hissing at it like a snake, and frequently refusing to leave her eggs. The young, when first fledged, resemble the parent bird in brightness of colour more than the young of most other birds. The head is blue, cheeks white, with an edging of dark blue ; back, greenish yellow ; tail, blue ; under parts, yellow ; legs and bill, black. Like the greater titmouse the little bird is quite omnivorous, feeding on everything that comes in its way. It is fond of carrion, and I have frequently seen it feeding on dead mice or rats. It comes boldly to the window, and even into the room, in search of flies. It is, however, very impatient of confinement, and difficult to keep alive in a cage. In the winter it accompanies the golden-

crested wren, etc., in their wanderings in the fir woods in search of insects, though it is always more inclined to the neighbourhood of houses, and is frequently seen in the midst of large towns. It is a busy meddling little bird; at the head of all attacks on cat or owl that may stray into the gardens or shrubberies, seeming to become quite infuriated against these enemies. The egg is white, spotted, not very closely, with pale red.

The thrushes begin to sing, and the corn bunting and yellow-hammer to utter their spring note.

Jan. 14 (1847).—Neither widgeon nor teal are yet in full plumage; occasionally I kill a drake widgeon in full feather, but most of them are still much mottled with brown. There is a very great difference in the size of the drake and duck widgeon.

A great number of the bird called the little auk (*Alca alle*) are found dead along the shore.

This bird, *le petit guillemot* of Buffon, visits us at irregular intervals, and on these occasions it generally comes in great numbers, being found at the mouth of every stream, and not unfrequently in ponds, or even lying disabled and worn out in fields at some distance from the sea; one was brought to me in 1851 which was picked up alive in a ploughed field, where the poor little stranger was found sitting upright, and apparently quite bewildered, by its change of situation from the clear depths of the arctic seas to a muddy ploughed field. The upper parts are black and the lower white, the bill is short and strong, and shaped more like that of a black-cock than that of any water-fowl; legs and toes of a brownish yellow. In the arctic regions they are found in immense numbers.

A weasel has eaten a great many of the mice caught in the boys' traps, and was caught itself at last in a rat trap. I don't know a more courageous little animal; when overtaken by a dog, it flies directly at the dog's head and bites furiously. I shot a beautiful milk-white stoat that came out of a rabbit hole where I was ferreting.

Jan. 16 (1848).—I have not seen any swans this winter. I

shot two fine roe last week, and my gun snapped at a third, standing 20 yards from me.

Partridges, during the hard frost, feed on clover very much in this country ; they never get lean, apparently requiring very little food. In the snow they are unapproachable, though I remember when a boy at school killing nearly a whole covey in snow. I was lying hid, and a covey of partridges came within shot of the old flint gun I had borrowed for the occasion. I fired at them, killing three ; seeing that the rest of the covey did not move away, but after looking up collected round their dead companions, I fired again (having reloaded), killing two more, and still keeping concealed. I again loaded and got another shot, and might have killed them to the last, had not the school-fellow who was with me raised himself, when the birds immediately flew away—that is, the few that remained alive flew away, for I had killed them nearly all. Although I cannot plead guilty to ever having tried the same plan again, I have been told that these birds never fly off from the gun till they see the shooter.

The mallard has been for sometime in high beauty, and is most valuable to the dresser of salmon flies.

I see the widgeon (*Mareca penelope*) come regularly now at the ebb of the tide to feed on the grassy banks which are left uncovered by the receding of the water. They first feed as they swim round the edges of the small islands and banks ; but when the tide begins to recede, they come out on the banks and graze like geese.

During the summer I have seen a very few of these birds about the Loch of Spynie ; but am more inclined to suppose that they were wounded birds, unable to follow the migrating flock, than birds remaining to breed. In Sutherland I have found the nest ; and in Loch Naver and elsewhere the widgeon breeds regularly, though not in any great numbers. On the 9th September I have shot widgeon in this country. There was a small flock of eight or nine, and the two which I shot were evidently young, and must have been bred in the neighbourhood.

The migrating widgeon begin to arrive early in October or at the end of September, and according to the weather they come in larger quantities. By the beginning of November there are immense numbers, and their shrill whistle enlivens all the larger lochs and swamps. Towards night every widgeon seems to be in motion, flying to their feeding-places, either in the shallow places or along the edges of the water, where they can get at the grass and water-plants which form their food. Their flight is very rapid, and divided into small companies, they flit to and fro in every direction till they settle down to their food. During the day time they all collect and rest in the centre of the lochs. The widgeon, like the teal, is late in acquiring its full plumage, and in the flocks but a small proportion of drakes in full beauty are seen. The widgeon is also late in coming into full season for the table, and is in best condition from February to April. Like other wild-fowl when driven to feed on the sea shore, they soon lose their eatable quality. The drake is easily distinguished from other water-fowl by his bright chestnut-coloured head, having the front and crown of the head of a pale cream colour. The scapulars are long and pointed, black edged with white. The tail is long and wedge-shaped. The two middle feathers longer than the rest. The bill is short, of a bluish lead-colour. The female has not the bright colours of the male, but is an elegantly-shaped bird. The widgeon is indeed the most perfectly proportioned of any water-fowl, and the plumage of the male is peculiarly bright and beautiful. Both on land and in the water it is a very active bird; when on shore it walks upright and rapidly, and on the water is unrivalled both in swimming and diving. The egg has a brownish or rather a yellow tinge, instead of the green shade of the wild-duck, teal, etc. It is easily distinguished by this peculiar shade. It is rather larger than that of the shoveller. The nest is similar to that of other water birds; the eggs being well protected by the down of the female. The young when hatched have rather a brown than a green coloured covering, in this also differing from the common duck, teal, etc.

This season (1847 ?) the wild ducks have found out a new kind of food—the remnant of the diseased potatoes which have been left in the fields. My attention was first called to their feeding on them, by observing that my domesticated wild ducks had managed to dig well into a heap of half-rotten potatoes which had been put partly under ground, and then covered over with a good thickness of earth, as being unfit for pigs or any other animal. However, our wild-ducks had scented them out, and, although well supplied with food, they had dug into the heap in all directions, feeding greedily on the rotten potatoes ; in fact, leaving their corn for them. I then found that the wild ducks from the bay flew every evening to the potato fields to feed on the roots which had been left ; and so fond were they of them, that I often saw the ducks rise from the fields in the middle of the day—in the evening it was always a sure place to get a brace or two.

The mallard (*Anas boschas*) is quite omnivorous at this season : in the crop of one killed were oats, small seeds, shrimps, and potatoes, all the produce of his researches during the preceding night. There can be little doubt of this bird being the origin of our tame ducks. It breeds freely with the tame species, of whatever size or colour, and the young breed equally freely. The colours and appearance of the mallard are too well known to require any description. The wild duck breeds in all the bogs and marshes of this county, and also very frequently hatches its young in woods and quiet places at a considerable distance from the pool or lake to which it leads its young as soon as hatched. It is by no means an uncommon occurrence to find the eggs of this bird laid in an old crow's, or other bird's nest, at a considerable height from the ground. I never could exactly ascertain how the mother carries her young in safety to the ground. A curious instance of this bird building in a crow's nest was told me by a person whose veracity I am quite inclined to trust. My informant told me, that he one day took six or seven wild duck's eggs out of an old crow's nest, in a fir

tree near Loch-na-bo. Ten days or a fortnight afterwards he saw an owl fly out of the same nest, and on climbing to it he found three eggs of the common horned owl (*Otus vulgaris*), which bird also takes possession of a deserted crow's nest. The wild duck frequently has her nest in places apparently the most unlikely ; sometimes in the densest wood, at others close to a road or path, frequently in the long coarse grass or rushes at the edge of a lake. In fact, there seems no rule as to the situation or kind of ground, wet or dry, in which they breed. In a glen in Angus they nest freely in the holes left by fallen pebbles in the plum-pudding rock, at least 12 to 20 feet above the water. When strong enough, I suppose the young are thrust over the edge, and let fall in the stream. While laying and sitting, the old bird appears to be constantly adding down from her own body to the nest. On leaving her eggs for the purpose of feeding, etc., she covers them over most carefully, concealing even the path through the rank herbage to and from her nest. Their usual time of hatching with us is about the 25th to 28th of April ; the number of eggs ten to thirteen. Many of the young, when first hatched, fall a prey to crows and other vermin, notwithstanding the great care which the mother takes of them. About the first week in July the young ducks fly, and, as soon as the corn begins to ripen, they feed greedily on it, flying every evening to the fields. During the month of July, however, many of the old ducks are quite unable to fly, having lost their quill-feathers, which appear to drop out all at once. The mallard drake loses his male plumage in May, assuming the appearance of the female, only rather darker. They have not re-acquired their full beauty till the end of October or first week in November. Though associating in large flocks during winter, they still keep in pairs ; and when the flocks are on wing, they break off very soon into detached companies of two, four, six, etc., in which the pairs are easily distinguished. This makes me inclined to think that the same drake and duck, whenever once paired, keep constantly together till divided by the gun or other acci-

dent. Some wild ducks which I had domesticated became gregarious, one drake serving many ducks, like tame poultry. But, one season, having been neglected, and wandering out in the fields and ditches, they resumed their wild habits, paired, built, and lived in pairs quite conjugally. Foxes kill a considerable number of ducks, and the peregrine falcon frequently strikes down an old bird when found in a favourable situation, though so rapid is the flight of the mallard, that I have seen the falcon unable to gain a yard on him during a long chase. When the corn is exhausted in the fields, the wild-ducks feed on the potatoes which are left on the ground, eating both sound and rotten roots indiscriminately.

When driven by frost and snow to feed on the sea-shore, the wild-duck is no longer eatable, acquiring a rank fishy taste immediately.

No bird is more easily domesticated. I have several pairs (which are pinioned) in my garden, and they rear their young and bring them up as well or better than tame ducks would do in the same situation. They destroy young lettuces, endive, and other plants; but at the same time must be of considerable use by feeding on slugs and different kinds of grubs—they keep my gooseberry trees entirely free from caterpillar. Beside the wild ducks which breed in this country, there are great numbers which arrive at the beginning of winter and leave again in spring. Occasionally a half-bred wild duck is killed, though not so often as might be expected. It is a curious fact that these half-bred birds are frequently larger than either of their parents.

During the present severe frost I am much amused with the long-tailed ducks (*Harelda glacialis*), who at every flow of the tide swim into the bay, and often some way up the river, uttering their most musical and singular cry, which at a distance resembles the bugle note of the wild swan.

This beautiful bird is wholly a salt-water duck, and I never saw it higher than the mouth of a river. It does not arrive very early, but stays late, even in May it enlivens the sea-shore; very

active in the water, it dives incessantly when feeding, frequently approaching very near the shore and getting within the breakers, when, to the looker on, the bird apparently is on the point of being dashed ashore, it appears to dive horizontally as it were into the wall of the wave, and to emerge again beyond the broken water. In spring the long-tailed duck flies constantly to and fro in pursuit of each other, dropping again into the water after a short flight, and uttering its soft but far-sounding cry. It is a small bird about the size of a widgeon, and, like that bird, of peculiarly elegant shape. The bill is small, of a black colour, divided by an orange-coloured stripe. The top of the head is white, with the feathers slightly elongated. The rest of the bird is variegated with white, a fine reddish brown or chocolate colour, and black; the legs and feet are light blue or lead colour; the tail of the male distinguishes the bird from any other; the four middle feathers are black, the two centre feathers being much elongated and sharply pointed; the rest of the tail is white; though plump and white when picked, the flesh is strong and rank.

The female is quite different in plumage, being of a more sombre and dull colour, but elegantly shaded and marked with reddish brown, ash colour, and white. The tail also is short. The shape of the bill and feet is similar to that of the male, and easily mark the bird. Both sexes vary much in the general shade of their plumage. They breed in great numbers in the arctic regions.

As long as there is no collection of floating ice the bay is very full of birds, and the shores are enlivened with large flocks of oyster-catchers (*Hematopus ostralegus*), and an infinite variety of other waders.

The oyster-catcher remains during the whole year in this district. During the winter it frequents the sea-shore entirely, where it feeds on small shell-fish, and any worms, mollusca, etc., which it can find. In spring many are found in most of the rivers, where they breed on the gravelly banks and ridges. They also

breed in the retired parts of the sea-shore, building no nest, but laying their large handsomely-marked eggs in a slight cavity amongst the gravel or sand. The egg is stone-coloured, much spotted with brown and grayish black. The old birds are very clamorous when the young or eggs are approached, flying and wheeling rapidly round the head of the intruder. At other times they are very shy ; at the same time no bird is more easily tamed or lives more contentedly in domestication. Though not web-footed, they dive and swim with great rapidity and strength when wounded in the wing. It is a strongly-made and powerful bird. The bill is orange-coloured, with a very strong and hard tip, well calculated to break into a mussel shell ; but quite unequal to an oyster, notwithstanding the name of the bird. In this respect the bill contrasts with those of the woodcock, snipe, etc., which find their prey by boring into mud and soft ground, the tip being more like ivory in the oyster-catcher, and not provided with the fine nerves which distinguish these birds just named ; the eyes are peculiar, having the orbits orange, and the irides crimson-coloured ; the feet are flesh-coloured ; the toes short and rather clumsy-looking ; the upper parts of the plumage and the breast are black ; the tail white, with a black band at the extremity ; the lower parts are all pure white. The plumage of the young birds is much less clear and bright. Although they pair in the breeding season, I have frequently seen large flocks of these birds collected together in the month of June, when their nesting was in full progress, and when I should have imagined that every bird would be busily employed with eggs or young, instead of sitting in dense masses on the banks and sands of the Bay of Findhorn, with apparently no care on their shoulders. They do not on these occasions appear to be collected for the purpose of feeding, but to be resting and passing their time as they do in the midst of winter.

The red-shank begins now to utter the peculiar whistle which indicates the return of spring ; early as it is, too, the jack-snipes, red-wings, field-fares, etc., seem to return northwards, as I see

great numbers of these and other birds, which had for the last month or two disappeared, having probably then gone southwards.

The red-shank (*Totanus calidris*) is a very common bird, though not so numerous during the depth of winter as at other seasons. They breed in most of the marshy places in the district. The nest is more concealed than that of the peewit, being placed in a tuft of grass or rushes, which hide it tolerably well from the passer by. The eggs are four in number, large for the size of the bird. They vary much in colour, but are usually of a pale reddish-brown, slightly tinged with olive, and spotted with dark brown and red brown. The upper parts of the plumage are pale brown, with a glossy olive shade; the lower parts are white, more or less freckled with brown. The legs and feet are red, and sufficiently distinguish the bird. The bill is shorter in proportion than that of the greenshank, red at the base and black at the tip. The tail is marked with bars of white and brown. During the breeding season the red-shank is very noisy, and seems scarcely to cease uttering its loud shrill cry, more particularly when disturbed. It then flies to and fro with a quick jerking flight, screaming loudly and incessantly. It is also very watchful in the winter, and frequently cheats the sportsman of a shot at wild-ducks, etc., by giving the alarm to these birds.

The little water-rail (*Rallus aquaticus*) seems to be a great wanderer. I find its track, and the bird itself, in the most unlikely places; for instance, I put up one in a dry furze field, and my retriever caught another in a hedge, at some distance from the water. I took the latter bird home alive to shew to my children. When I took him out of my pocket, in which most unaccustomed situation he had been for two hours, the strange little creature looked about him with the greatest nonchalance possible, shewing fight at every thing that came near him; and when, after having gratified the curiosity of the children, we turned him loose in a ditch of running water, he went

away jerking up his tail, and not seeming to hurry himself, or to be in the least disconcerted.

It is, however, seldom seen, in consequence of its very retired and shy habits. It seldom leaves the closest and densest rushes and reeds, running with great rapidity through these, and swimming across the intervening pools and streams, but seldom flying; and, when flushed, it drops again after a very short flight, immediately running away, and defying all efforts to make it again shew itself. The nest is placed in the rough grass or rushes in the marshes. Spynie is the only place in which I have succeeded in finding the nest, and then only with the assistance of a good water-dog: so concealed is the nest and so quietly does the old bird leave it. It is made of grass and a few rushes. The eggs are about eight in number, of a pale buff colour, spotted with ash, and a reddish-brown. The feathers of the upper parts of the body are black, edged with brown; the lower parts are of a blackish lead colour; the flanks are prettily barred with black and white. The legs are a dull flesh or brownish red colour; the toes are very long, and the legs are placed peculiarly far behind. The bill is long, slightly curved, red at the base, and shading off into dark brown at the tip. The irides are red. The weight of a water-rail is about five or six ounces.

In hard frosts during this month I get a great number of wild-ducks by waiting for an hour (the last hour of light) near some open place in the lochs or streams where they come to feed. On my way home from shooting, when I have been in the direction of the swamps, I often do this, and generally succeed in filling my bag with mallards and widgeons.

Just before sunset I take up my position in the midst of two or three furze bushes, within easy shot of where a small stream runs into one of the lakes, keeping the water constantly open. Having given my retriever the biscuit which I always carry for him on these cold days, I light my pipe (the great comfort of the patient wild-fowl shooter) and look out towards the bay for

the mallards. The bay is nearly half a mile off ; but I can see the ducks between me and the sky almost as soon as they leave it. At first a solitary pair or two come, quietly and swiftly, probably making their way to some favourite spring farther inland. With the help of a cartridge, I bring down a brace from a great height, as they pass over ; sometimes, tumbling on the ice of the loch behind me, they are nearly split in two ; sometimes, when winged, they fall in the rushy stream, and give the retriever no small trouble and cold before he gets them ; however, he always succeeds, and having brought the bird and received his reward of ship-biscuit, he lies down again, but with eyes and ears all intent on what is going on. The sea gull or heron may pass, and he takes no notice of them ; but the moment that a wild duck's quack, or the whistle of his wings is heard, the dog's ears erect themselves, and he watches my face with a look of most inquiring eagerness. I hear the wild swans trumpeting on the sea, but know that they are not very likely to come where I am placed. Presently, a brace of teal pitch suddenly and unexpectedly within a few yards of me, having flitted in from behind. I kill the drake, but cannot get a shot at the duck, as she flies low, and the smoke, hanging heavily in the calm evening, prevents my seeing her. But all at once the mallards begin to fly from the sea, and, for half an hour or less, I have to load and fire as fast as I can, as they fly over. I prefer shooting them on the wing, for if I let them pitch in the water, my dog has a swim every time I kill one, and gets half dead with ice and frozen snow.

The mallards generally fly in from the sea rapidly, and at no great height ; but it requires some practice to kill them, as their flight is much quicker than it appears, and they require a hard blow to kill them dead. If wounded only they fly off, and, dropping at some distance, I can seldom get them that night, owing to the approaching darkness. Sometimes my retriever marks the direction of a wounded duck and gets it, but generally they are lost, and serve only to feed the foxes, who seem to hunt

regularly for maimed birds round the lakes. Having killed ten mallards and a teal, it becomes too dark to shoot any more, although I still hear their wings as they fly over my head. Besides which, I have nearly three miles to walk; and my keeper, who has also killed two or three, had, before we commenced duck-shooting, sundry animals to carry, the produce of my day's wanderings. We have to walk home too, there being no road near these lakes. So, after I have refilled my pipe, and the old fellow has recharged his nose with a spoonful of snuff, we shoulder our game and set off. Eight or ten fat mallards are no slight load over a rough track in the dark, so we keep the sands as far as possible, listening to the different cries of the sandpipers, curlews, and numerous kinds of wild fowl who feed on the shallows and sandbanks during the night time. Occasionally, in the moonlight, we catch a glimpse of the mallards as they rise from some little stream or ditch which runs into the bay, or we see a rabbit hurrying up at our approach from the sea-weed which he had been nibbling. In this way, with very little trouble, and often much nearer home, I can generally reckon on getting some few brace of wild ducks in the winter; shifting my place of ambush according to the weather, the wind, etc., changes in which cause the birds to take to different feeding-places.

The well-known and beautiful little duck, the teal (*Querquedula crecca*), remains with us during the whole year, but is more plentiful at some seasons than others; it breeds generally in the immediate vicinity of some swamp or marsh, making its nest in a tuft of heather, or in some grassy spot slightly elevated above the water. Like the common wild-duck, however, the teal sometimes hatches her young in the woods at some distance from the water; and I have more than once fallen in with the old bird leading her helpless and tender brood from the nest to the safety of the marsh. How the little birds when newly hatched manage to make their way through long heather and other obstacles, is a mystery. In July the old teal frequently completely lose their

quill feathers and are unable to fly. Though quick and rapid divers they are not so difficult to be overtaken in the water as the widgeon. In September and October teal frequently collect in large flocks, and are easily shot. Before the breeding season the same thing occurs, and one well-directed charge goes far to fill the sportsman's bag. As the winter draws to a close the teal alter their peculiar whistle, and are very restless in the marshes, constantly flying to and fro. The drakes do not acquire their plumage till later in the winter than most other water-fowl. Though so numerous in the spring and autumn, the greatest part of these birds go southwards during the winter. The nest and eggs are exactly similar to those of the mallard, but on a proportionately smaller scale. The number of eggs is about eight. I know no nest prettier than that of the teal when the eggs are near hatching and the full quantity of down surrounds them. Though so loose-looking a material, the whole may be lifted in a compact mass. A collection of the nests of all water-fowl, with their eggs, would be a beautiful addition to the cabinet of the collector, particularly if taken when the eggs have been laid for ten days, and the old birds have wrapt them in the full supply of down. The teal is too well known to require any description. For a scientific description of any bird I may refer my readers to Yarrell, Jennings, or any other more learned author than myself. I only pretend to give the leading characteristics of the bird by which they may be recognised by the casual observer.

Jan. 25.—I shot at a mallard's green head yesterday, at a long distance off, with a green No. 3 cartridge, and the cartridge did not open but cut his head entirely away as a ball would. I find that the cartridges very often have either mixed shot or shot of quite a different size to what they are marked, a sad proof of the depravity of cartridge makers. I have no doubt we constantly lose chances in this way; last year I had some packets of green, marked B.B., and fired several of them at wild-geese without killing them, when I knew I aimed straight; so I opened the rest of the cartridges and found instead of B.B. shot, a vile

and eccentric mixture of No. 6, No. 7, etc. etc. ; I wrote to Eley, who was then alive, and he promised to amend it ; but this year I opened a "No. 3" cartridge and found No. 6 in it.

The greater titmouse (*Parus major*) is a brightly-marked bird, and lively and interesting. The head is black, with white cheeks ; from the chin there runs a black mark dividing the breast, which is of a yellow tint slightly inclining to green ; the back is greenish ; tail dark ash colour ; legs blue lead colour, strong in proportion to the size of the bird ; the bill is black, short, and straight. This is perhaps (with the exception of the crested titmouse) the least common species of the titmouse in this country ; at the same time it is by no means rare. Though sometimes seen in company with the flocks of the smaller titmouse, golden-crested wren, etc., in the woods, it is more often seen in gardens and near houses. It feeds on almost everything—seeds of all kinds, fruit, such as apples and pears, insects, raw meat, indeed nothing comes amiss. I have often seen it caught in mouse-traps baited with toasted cheese. It also eats a great many of my walnuts when they fall from the tree ; when it finds one the shell of which is not very hard it digs into the walnut with its bill till it reaches the kernel, which it feeds on. It also—like the blue tom tit and willow wren—is fond of coming about the windows for the blue-bottle flies, which it seems very fond of. It builds in holes of walls, hollow trees, etc. It lays six or eight or ten eggs—white, spotted with red-brown.

The marsh titmouse (*Parus palustris*) is numerous in the fir woods during winter, forming part of the large flocks of birds which are constantly passing in search of food, hanging on the branches, and prying into every crevice for insects or their eggs and larvæ. It also feeds on small seeds, meat, etc. It is about the size of the blue titmouse, but is of a duller colour. As to its plumage, the head and throat are black, the back of a gray ash colour, and the lower parts of a dingy white ; tail dark, approaching to black ; legs lead colour. The nest is placed in clefts and holes of trees ; the eggs are white, with red spots.

The cole titmouse (*Parus ater*) is more uncommon than the marsh titmouse. The top of the head and neck are black, with a white spot on the nape of the neck, cheeks irregularly marked with white. The back of an ash colour inclining to green, the lower parts a dirty white. Legs lead colour. Its habits are much the same as the other titmice, frequenting large woods and bushes, searching the leaves and bark for insects. The eggs are white, with a few red spots.

The long-tailed titmouse (*Parus caudatus*) has a body smaller than almost any other British bird. It is numerous in the woods at all seasons. During the winter, large numbers, in scattered flocks, constantly pass through the woods, flitting from branch to branch, and hanging in all sorts of attitudes to the twigs, as they search for food. They are frequently in company with the golden-crested wren, the other kinds of titmice, and tree-creepers. In summer it is also numerous. The nest is beautifully made, covered at top, and frequently pendent from a branch, sometimes placed in the heart of a thorn bush, where it is difficult to insert the hand, sometimes fitted into the branches of an oak or other tree, and so artfully covered with lichen similar to that on the bark of the tree, that it is very difficult to distinguish the nest. It frequently also breeds in shrubberies, not far from houses. The nest has sometimes two entrances, at other times only one. The long-tailed tomtit has so short a bill, and the head and body are so closely joined, forming together almost one ball, that, with its long slender tail, it has a most singular appearance as it flies, with its dart-like motion, from tree to tree. The top of the head is a mealy kind of white. Over, or rather through the eye, is a black streak. The back is black shading off to a reddish brown, frequently to a kind of rose-colour. The lower parts are dull white inclining to red; the tail has the outer feathers partly white, the rest black; the legs are black. The colours of the whole plumage are blended together, and vary as to shade in different specimens. Constantly in motion, this little bird seems never to be still for

an instant. The nest is beautifully made, and covered in the most regular manner with lichens on the outside. The inside seems composed of a loose mass of feathers. A pair which built in a yew tree near my house afforded me much amusement by their constant activity in searching for proper materials, and by the rapidity with which they built. The eggs are eight or nine in number, white, with red spots, though I have heard of many more being found in one nest. The food of this titmouse consists wholly of insects. It is a great mistake to suppose that any titmice are mischievous in a garden. They are accused of picking off the buds of fruit trees. But I am confident that they never touch a bud which does not contain a small grub or caterpillar, and the benefit which they confer by their destruction of insects and caterpillars, and also of the minute eggs of these creatures, exceeds all belief, and can only be known by watching a pair of blue or other titmice feeding their numerous progeny, every one of whose ravenous appetites calls for a constant supply of insect food. Most birds, if not all, repay for the seed which they eat by the insects which they destroy. The titmice do this more than any.*

* Very great harm has resulted to agriculture in France from the indiscriminate slaughter of small birds. In one of the eastern departments alone the loss sustained in one year by the depredation of wire-worm was four million francs, or £160,000. Had the small birds not been so ruthlessly destroyed, there is every reason to believe that the insect pests would have been so kept in check as to be comparatively harmless. It is calculated, and apparently on very good authority, that a pair of sparrows, during the season they are feeding their young ones, kill, in the course of a week, about 3400 caterpillars. Yet farmers and gardeners are so ignorant of their true interests that they annually destroy hundreds and thousands of these feathered guardians of their crops. One Sussex sparrow club alone last year destroyed no less than 7261 of those birds, and a prize was awarded to the most wholesale murderer. In various parts of England, also, there is a stuff used called "sparrow and vermin killer," by which large numbers of our most useful small birds are poisoned. One writer mentions that a man, whose trade it is to kill small birds, showed him with pride about "2000 sparrows, 700 yellow buntings, 600 common buntings, innumerable goldfinches, and linnets by the hundred." Many

The crested-titmouse (*Parus cristatus*). I know no bird so confined to particular spots as the crested titmouse. Their only regular place of abode, as far as has been ascertained,* is the large forest near Grantown on the Spey; there they build tolerably abundantly in the decayed clefts and holes of the old fir trees, making a smaller nest than most other birds of the same genus. They lay about six eggs, white with dark red spots. Their habits are like those of other titmice; searching the trees for small insects, and flying from branch to branch uttering a loud shrill cry. On the head is a tolerably long and pointed crest of black feathers, the upper parts are pale greenish brown, the lower parts dull white; tail, gray. This is the dullest coloured of all the titmice, but easily distinguished by its remarkable crest, which it erects with great facility. It is little known as a British bird. My attention to it as such was first called by Mr. Dunbar;* since then I had frequent opportunities of obtaining both the bird and the nest from the forest of Glenmore, near Grantown, and I have also every reason to

of these birds, besides destroying insects, also aid the farmer and gardener much by eating the seeds of troublesome weeds, and so prevent their propagation. In Scotland, also, there has of late years been a crusade against the birds; and in the Carse of Gowrie farmers have offered as much as one penny per head for every adult sparrow sent in to them, and have paid a smaller sum for every sparrow egg. Almost coincident with this virulent attack upon the feathered songsters of our woods and hedgerows, there has been an increase in the insectivorous enemies of the garden and the farm, and during the past two or three years especially whole fields have been devastated by the grub—a foe against which the farmer is next to powerless without his tiny winged allies. That sparrows devour a good deal of grain at times cannot be denied, but the services they render the farmer far more than compensate for the few cereals they pick up. Besides, they could be easily scared off the ripening corn by a boy, about whose rattle and shouting the grub is quite unconcerned. Professor Buckman has recently noticed another service which a small bird, the common tom tit or blue-cap, performs for the benefit of the forester, viz., that it destroys the flies which cause the oak galls, an abnormal growth, threatening ruin to our young oak trees.—J. R. June 1863.

* A naturalist, formerly of Inverness, now of Brawl. He accompanied Mr. St. John on his Sutherland tour.—Ed.

believe that it frequents some of the upper woods of the Findhorn, near Dulsie, though not so commonly as the first-named forest.

The yellow-bunting or yellow-hammer (*Emberiza citrinella*) is seen everywhere, though not frequently collecting into flocks. The male is a beautiful bird, the female less brightly marked. It is too well known to require description. The food of this bunting consists principally of grain, though, like most other granivorous birds, they feed their young almost wholly on caterpillars and insects. The nest is made of dry grass and fibres, and lined with horse hair; it is placed frequently on the ground, and at other times in a low bush. The eggs are prettily clouded and streaked with a mixture of purplish brown and dingy white.

The reed-bunting or black-headed bunting (*Emberiza schœniclus*), though common, is not so generally spread as the yellow bunting, frequenting most commonly rushy, reedy pools, etc. Scarcely two reed-buntings are marked alike, varying also much in different seasons. The head, throat, and breast of the male are clear black in summer, in winter the black feathers are edged with brown; in the female the head is reddish brown. It builds in rushes generally, or fixes its nest with great care between three or four stems of reeds; it is built of dried grass, and lined with softer grass mixed with down from the reed or rush. The egg is small, rather round, and of purplish brown. The food of this bird consists of various seeds and insects. I have frequently found a great many of the small black beetles found on willow bushes in its crop.

The first appearance of the fieldfare (*Turdus pilaris*) is about the middle of October, but they do not come in any numbers till the weather becomes stormy and cold. They feed in the same manner as the thrush and blackbird, though not being here in the season when our garden fruit is to be had, they confine their vegetable diet to wild berries. In protracted snow-storms, when the supply of mountain ash is exhausted, the fieldfare

attacks the turnips, feeding on the root ; this must, however, be only a last resource. They do not all leave us till May. The greatest number, however, depart earlier, towards the end of April. They breed in Norway and Sweden in large societies, as the rooks do in this country, and from the time when their nests are found they must commence the business of incubation immediately on their arrival. During the latter part of their stay here they collect on the highest trees and utter a low kind of warbling. The fieldfare is easily distinguished from any of our thrushes by its colours. The upper parts are all more or less tinged with blue ash colour ; the breast is yellow, spotted with black ; the tail is brownish black ; the bill is yellow ; the sides brown. They vary, however, much in plumage, but have all the same general characteristics. The fieldfare is excellent to eat, and when they have fed for a while on the bitter rowans, they might pass for a higher flavoured *becco fivo*.

The redwing (*Turdus iliacus*) is smaller than our song thrush. The upper parts of the plumage are of a darker brown. It has a conspicuous white streak over the eye. The upper part of the breast and the flanks are strongly spotted ; but the lower part of the belly is not much if at all marked with spots. The most distinguishing spot is the bright chestnut or red brown under the wing, from which it takes its name. It arrives and departs with the fieldfare, and its habits are much the same. It breeds in Norway also, but not in companies. I have frequently heard its cry in the migrating season passing over my head in the darkest night. It is particularly good eating, having a delicate flavour superior to any other small bird, except perhaps the corn bunting.

The curlew (*Numenius arquata*) breeds in the higher districts. The nest is placed in a rank tuft of heath or in rough grass in open moorlands. The egg is very large in proportion to the size of the bird ; it is of a greenish colour much spotted with brown. The young when first hatched have not the long bill of the old bird, but it gradually increases, and by the time the birds have their feathers complete it has reached its full length.

Curlews differ very much in size, more so than almost any other bird. As soon as the autumn commences they leave the higher grounds and betake themselves to the sea-shore and the neighbouring fields. As long as the fields are free from frost they feed usually on worms, grubs, etc., which they extract with their long bills, boring in the same manner as woodcocks do. When driven to the sea-shore to feed they live on small cockles and other shell-fish, which they can swallow whole; their bills not being hard at the point, like that of the oyster-catcher, they cannot break any hard substance. No bird is more wary and cunning than the curlew. They are almost always the first bird to give an alarm when an enemy approaches, and I have often lost a shot at wild-fowl by the noisy signal of danger given by these birds, as ducks, geese, etc., invariably take flight as soon as they hear it. In the breeding season, however, the love of their young overcomes their dread of mankind, and they wheel round and round the head of any intruder, uttering loud and clamorous cries. Though much esteemed by some epicures, it is very seldom that I have found the curlew free from a fishy and rank flavour, excepting in the breeding season, when they live wholly inland, but then they are lean and dry.

The whimbrel (*Numenius phaeopus*) is considerably less than the curlew, and the bill is shorter and less curved in proportion. They visit us early in the autumn, but in small flocks, and do not appear to settle much on any part of the coast. During their stay they may be easily recognised by their shrill cries uttered while flying overhead. I have seen them on most parts of the coast, though never in great plenty. The whimbrel breeds on the most northern part of the island, not on the high grounds, like the curlew, but near the sea-shore. The egg is similar to that of the curlew, but proportionately smaller.

The purple sandpiper (*Tringa maritima*) is rather larger than the ring dotterel. It visits the rocky parts of the coast in autumn, but not many seem to remain during the winter. It is known amongst others by its darker plumage, its tameness,

almost amounting to stupidity, and by being invariably seen on the rocks instead of the sands. The bill is brownish yellow or orange, and black at the tip. The legs and feet are of a yellowish brown. The upper part of the plumage is ash colour, with dark purple and sometimes nearly black shadings; upper part of the breast gray ash colour, the lower part white. The purple reflections on the upper parts are so decided as at once to distinguish this bird. Different specimens vary in the depth of this colour, but in all it is sufficiently conspicuous.

The little stint (*Tringa pusilla*) is the least and the rarest of our sandpipers, appearing but seldom on our coasts. The bill and legs are black, each feather edged with brown; the upper parts are all variegated in the same manner, the lower parts are pure white. It is scarcely six inches in length, and is a delicately-formed and beautiful little bird. It does not breed in this country.

The common sandpiper (*Totanus hypoleucos*) appears early in spring, and is seen and its note is heard on the bank of every stream. It seems never to rest, but is continually running to and fro on the gravelly shores of rivers and burns searching for insects. The nest of the sandpiper is more carefully concealed than that of most similar birds; it is placed generally under a bank, or at the foot of an alder or willow bush, and is difficult to find. It is made, too, with some care, and consists of dry grass, etc. The eggs are four in number, of a reddish white, spotted all over with rufous brown. This bird frequents not only those streams which are near the coast, but is also seen many miles inland. Though nowhere numerous, it is universally spread over the country during the breeding season. The bill is about an inch in length, brown and dark at the tip. The legs are brown, with a green shade; the upper part of the plumage is pale brown, with an olive tint, the four middle tail feathers are of the same colour. The outer webs of the two outer feathers of the tail are striped with brown and white. While on wing it may be recognised by its clear shrill note re-

peatedly uttered, and while running on the ground by the peculiar jerking motion of its tail.

Trout are not nearly so tender a fish as is generally supposed. At the farm-yard here they have two trout, about six inches or more in length, living in the wooden trough out of which the cart horses drink. They were caught in the river in August, and throughout all the severe frost have lived, and apparently continued in good condition, although sometimes in passing I have seen the water in the trough so firmly frozen, and the ice apparently reaching so low, that the trout had scarcely room to swim. When fresh water is put in they always come to the place where it is poured, and seem to look for any particles of food, or any insects that may come in with it. They feed on worms which the boys often bring them, and which they take immediately without fear. The change of colour in fish is very remarkable, and takes place with great rapidity. Put a living *black* burn trout into a *white* bason of water, and it becomes, within half-an-hour,* of a light colour. Keep the fish living in a white jar for some days, and it becomes absolutely white ; but put it into a dark-coloured or black vessel, and although, on first being placed there, the white-coloured fish shews most conspicuously on the black ground, in a quarter of an hour, it becomes as dark coloured as the bottom of the jar, and consequently difficult to be seen. No doubt this facility of adapting its colour to the bottom of the water in which it lives, is of the greatest service to the fish in protecting it from its numerous enemies. All anglers must have observed that in every stream, the trout are very much of the same colour as the gravel or sand on which they live. Whether this change of colour is a voluntary or involuntary act on the part of the fish, I leave it for the scientific to determine.

* In the case of some fish the change is perceptible in five minutes.

CHAPTER THE SECOND.

FEBRUARY.

February 1 (1848).—We are all frozen up here ; and no ducks in my lochs. I only kill enough partridges and hares for the larder.

(Same day, 1854).—Wood pigeons have been in the garden two or three days. Cold and raw.

February is always with us the most snowy month of the year. I find that, in my journal for the first week of this month, during several years, it is generally marked down that the country is clothed in snow. The quantity of floating snow and ice which comes down the river fills the bay, and sends the wild-fowl to some less dreary part of the country. In some places the course of the river is quite altered, being choked up by the accumulation of ice on the shallows, and the water takes some new run. What becomes of the fish during this kind of weather ? Occasionally a golden-eye or long-tailed duck pitches in some clear spot of the river, but is almost immediately driven out again by the floating ice.

A male golden-eye (*Clangula glaucion*) in full plumage bears the following description :—The head is round and slightly crested. Colour, glossy black with a greenish shade, a white patch under the eye, the irides of the eyes bright yellow, breast and lower part of the neck white. Feathers on the thigh slightly tipped with black. The back and upper parts black. The wing brown-black, with a wide white band divided in the middle with a small black stripe. Bill small, elevated at the base, of a blue-black. The legs orange colour, feet rather darker. The female

is altogether of a duller plumage, and considerably smaller. The young males are more like the female, and vary much in size. Both female and young male are without the white spot under the eye, nor are the irides of the same bright yellow. The golden-eye does not breed in this country. In Norway it breeds in a hollow tree, often entering at a hole made by the large woodpecker. The golden-eye arrives here early, and remains late in the spring. It frequents almost every loch and stream, though always in small numbers—generally in pairs or singly. The flight is rapid, and the sound of the wings is so peculiar, as to be distinguished amongst a large flock of other water-fowl. It is not a wild or shy bird, but very active in diving—as it feeds wholly under the water. The flesh is rank and unfit for the table, though the bird is generally very fat.* Almost all wild-fowl, however, lose their fishy flavour if skinned before being dressed, as that operation takes off the fat or blubber in which the strong flavour is contained. The golden-eye duck differs so very much in size and plumage at different ages and according to sex, that it is sometimes difficult to decide whether a bird is a golden-eye or not. But from long observation I am inclined to suppose that many ducks, such as those called the morillon, etc., are but golden eyes at different stages of maturity.

The feet of ducks are peculiarly ill adapted for perching on trees; nevertheless, as I have said, the golden-eye generally breeds in hollow trees, not only in broken recesses of the trunk, easy of access, but even in situations where, after having entered at a narrow round aperture, the bird has to descend for nearly an arm's length, almost perpendicularly to reach the nest. Through

* "Many of the duck tribe, in spring, are sent to table not fit to be eaten, from neglecting to cut away the back of the birds. From this neglect an admirable viand is presented, rancid to the taste and offensive to the smell; simply cut away the lower half of the back, and you at once get rid of the portion of the bird that contains the oil, which melts before the fire and pollutes your food."—*How to cook sea birds, from Campbell's Life in Normandy*, vol. ii. page 49.—ED.

this same entrance also has she to take her young ones when hatched, before they can be launched on their natural element.

The foot of the heron, as well as its general figure, seems but little adapted for perching on trees, and yet whoever visits a heronry will see numbers of these birds perched in every attitude, on the very topmost branches of the trees. The water-ouzel manages to run on the ground at the bottom of the water, in search of its food. All these actions of birds seem not only difficult, but would almost appear to be impossible. Nevertheless the birds perform them with ease, as well as many others equally curious and apparently equally difficult.

I could give numberless instances of birds and other animals performing actions and adopting habits which to all appearance must be most difficult and most unsuited for them; all these prove that we are not to judge of nature by any fixed and arbitrary rules, and still less should we attempt to bring all the countless varieties of animal life into any system of probabilities of our own devising. The more we investigate the capabilities of living animals of every description, the more our powers of belief extend. For my own part indeed, having devoted many happy years to wandering in the woods and fields, at all hours and at all seasons, I have seen so many strange and unaccountable things connected with animal life, that now nothing appears to me too wonderful to be believed.

The feet and claws of different kinds of hawks vary very much, being beautifully adapted to the manner in which each bird strikes its prey. If we examine the claws and feet of the peregrine falcon, the merlin, or any of the other long-winged hawks, including the varieties of those noble birds, all of which I believe were called in the age of falconry the "Ger Falcon," such as the Iceland, the Greenland, and the Norwegian falcon, we find that their power consists rather in their strength of talon and foot, so different from the sharp needle-like claws of the hen-harrier, the sparrow-hawk, the gos-hawk, etc. The rationale of this difference seems to be that the falcons strike their prey by

main force to the ground in the midst of their flight ; whilst the other hawks usually pounce on the animals on which they feed, and take them unawares on the ground instead of by fair pursuit and swiftness of wing. The sparrow-hawk and hen-harrier seldom chase a bird to any distance on the wing.

The owls have all extremely hard and needle-like claws, and in every respect the bird is singularly well adapted for its manner of feeding, which it does almost wholly at night. Its immensely large ears must enable it to hear the slightest movement of the field-mouse, upon which it chiefly feeds ; and its sharply-pointed talons contract with a tenacity and closeness unequalled by those of any of the hawk tribe, excepting perhaps the hen-harrier. Again, the soft downy feathers and rounded wings of the owl enable it to flit as noiselessly as a shadow to and fro, as it searches for the quick eared mouse, whom the least sound would at once startle and drive into its hole, out of reach of its deadly enemy. As it is, the mouse feeds on in heedless security, with eyes and nose busily occupied in searching for grains of corn or seeds, and depending on its quickly sensitive ear to warn it of the approach of any danger. The foot of man, or even the tread of dog or cat, it is sure to hear ; but the owl glides quickly and silently round the corner of the hedge or stack (like Death, "*tacito clam venit illa pede*"), and the first intimation which the mouse has of its danger is being clasped in the talons of its devourer.

The owls of this country are far more serviceable to us than we imagine, destroying countless mice and rats. It must be admitted, however, that both the long-eared owl and the common brown owl will, during the time that they have young ones to feed, destroy and carry off pigeons, young game, and other birds with a determined savageness equal to that evinced by any of the hawk tribe.

The rough and strong feet of the osprey are perfectly adapted to the use which they are put to, that is, catching and holding the slippery and strong sea-trout or grilse. The fact of a bird

darting down from a height in the air, and securing a fish in deep water, seems almost incredible, especially when we consider the rapidity with which a fish, and particularly a sea-trout, darts away at the slightest shadow of danger, and also when we consider that the bird who catches it is not even able to swim, but must secure its prey by one single dash made from a height of perhaps fifty feet.

The swiftest little creature in the whole sea is the sand-eel ; and yet the terns catch thousands of these fish in the same way as the osprey catches the trout, excepting that the tern uses its sharp-pointed bill, instead of its feet. I have often taken up the sand-eels which the terns have dropped on being alarmed, and have invariably found that the little fish had but one small wound, immediately behind the head. That a bird should catch such a little slippery active fish as a sand-eel, in the manner in which a tern catches it, seems almost inconceivable ; and yet every dweller on the sea-coast sees it done every hour during the period that these birds frequent our shores. In nature nothing is impossible ; and when we are talking of habits and instincts, no such word as impossibility should be used.

The stoats are now pure white in almost every instance, although I shot one on the 3d of this month (1848) who had only very partially acquired his winter colour. My rabbit beagles ran him for a long time full cry on some rough ground. Whenever the stoat went into a rabbit-hole I turned him out again with a ferret, in this way running him till I killed him.

The rooks dig deep into the snow, and plough up the young wheat in great quantities with their strong bills.

While the river is in this state of confusion with ice, etc., I see that the otters betake themselves to the unfrozen ditches and springs to hunt for eels and flounders, which fish they feed on apparently with great perseverance, if one can judge by the distance they hunt for them in the snow. The otter, judging from the ground he goes over, must commence moving as soon as it is dark, and continue hunting till nearly daylight.

Notwithstanding the shyness of the otter, this animal is very determined in the defence of its young ones, and boldly confronts a person who takes one of them up. My keeper tells me that he has seen an old otter feeding her young with fish: the two young ones were sitting on a flat stone at the edge of the burn when their parent brought them a good-sized trout. They immediately both seized the fish, pulling and tearing at it like two bull-dog puppies. At last they came to a pitched battle with each other, biting, squealing, and tugging, and leaving the trout to its fate. On this the old one interfered, and making them quiet, gave the trout to one of them as his own. The other young one, on seeing the parent do this, no longer interfered, but sat quietly looking on, till the old otter (who in the mean time had renewed her fishing) came back with a large trout for it also.

When she brings a fish to the shore for her young ones, she calls them by a kind of loud whistling cry. Altogether this is a most interesting animal, graceful in its movements, and in salmon rivers not nearly so destructive and injurious as he is supposed to be, feeding on eels, flounders, and trout far more than on salmon: in such situations he is most unjustly persecuted.

Feb. 3 (1852).—Went to Loch Spynie in the afternoon; a great many ducks of all kinds, and also large flocks of peewits, the first time that I have seen them this spring. I shot a gull (immature herring gull) with its crop quite full of turnip, I never before knew that any gull ate these plants; the ground was quite free from frost, so the bird apparently might have found plenty of food more suited to it.

The full grown herring gull (*Larus argentatus*) is a large and handsome bird. It breeds in considerable numbers on the rocky coasts between Burchhead and Covehead. The back and upper parts of the wings are pale ash colour. The long quill feathers are tipped with black, with a white spot near the end of each feather. The rest of the plumage is white. The bill is yellow, with a knob on the upper mandible of bright orange colour. The irides are yellow. The legs and feet pale flesh colour. It breeds

on the ledges of the rocks. The eggs are olive-brown spotted with dark-brown. Like other gulls it feeds both inland and along the sea-coast, eating almost anything that it finds ; fish, flesh, or vegetable food, are all equally devoured. It would be an endless task to describe gulls in all their different states of plumage, so much do they differ at different ages and seasons, none attaining their full beauty and pureness of colour under less than two years, and the larger kinds not till their third season.

Feb. 6 (1851).—Cold and clear. Chaffinches sing ; a great number of thrushes, blackbirds, and missel-thrushes in the garden.

The missel-thrush (*Turdus viscivorus*) is seen in the autumn in large scattered flocks, feeding either in grass fields on insects and grubs, or collected on patches of juniper, holly, etc., it being a feeder equally on insect food and berries of all sorts. A pair always breed in my garden, but they appear to be quarrelsome birds, driving away all others of the same species during the breeding season. Though at other times a shy wild bird, it frequently places its nest in an apple or other low tree, within reach of the hand ; the hen sits very close, almost allowing herself to be caught when the eggs are near hatching. This indeed is a peculiarity among all birds, that the closer the eggs are to hatching the more unwilling the female bird is to leave them. The missel-thrush attacks any hawk or bird of prey which approaches its haunt with great clamour and boldness, striking fearlessly and closely at the intruder. The missel-thrush's song is rich toned and clear, but with no variety. It commences singing earlier in the season than any other bird. In the beginning of January the ear is frequently gladdened by its loud note, resembling more that of the blackbird than the thrush. It sings in the wildest and stormiest days, hence deriving a local name in some districts of "Storm Cock." When singing it usually sits on the highest twig of a tree. The missel-thrush is easily distinguished from any other birds of the same tribe by its superior size and lighter colour. The upper parts are a pale grayish brown. The lower parts are

white, often inclining to buff or pale yellow, and spotted with clear distinct spots of dark brown. They vary much in shade of plumage, according to age, etc. The nest is large, placed in the fork of a tree or where a branch joins the main stem. The egg is dull white, thickly spotted and mottled with pale brown, approaching in some to flesh-colour and dark brown. The nest is made of wool, moss, strong fibres, etc., and lined with dry grass.

Feb. 7 (1847).—To-day is the hardest frost I ever remember, with a cold north wind. If I dipped my walking-stick in water it was almost instantly covered with ice. Saw a flock of larks for the first time this winter.

Feb. 8 (1847).—Shot roe at Altyre. Much struck with the beauty and activity of this kind of deer, which are now in perfect condition, and the snow does not in the least spoil the scent in hunting them with beagles. I have been much amused (a rather cruel amusement) with the excessive cunning and tricks of the roe after the beagles have been on their track for an hour or two. They take to the most unlikely places, walking backwards and forwards over the lochs (on the ice), up and down drains, etc., etc., to throw the dogs off the scent. In a wide opening near which I was posted, a buck, on whose scent were a couple of hounds, came cantering out, and in the middle of the opening he suddenly stopped and remained standing for nearly a minute, the very personification of listening attention. Then, as the hounds came nearer, he crossed the remaining part of the opening, bounding along over the rough peat bog, with the most astonishing leaps both as to height and length. Suddenly a shot is fired, probably hitting the poor animal, for he instantly stops and stands for half a minute in an uncertain staggering kind of attitude, and then, lowering his head, disappears under the cover of the young plantation. Four couple of hounds are now on his trail, and, from their constant and eager cry, seem to be running him almost in view, at any rate with a very hot scent. Away he goes nearly out of hearing, but, coming to a steep ravine, he does not feel equal to crossing it in the face of his persevering

enemies, he turns sharp back, rather puzzling the leading two couples of large hounds, but just meeting two couples of staunch little beagles, who evidently, by the sound, all catch view of him, and the other dogs, turning him back to nearly the same place where he was first shot at, another barrel knocks down the poor little beauty almost close to the dogs, who are on him in a moment, and on the white snow *purpuream vomit ille animam*. No man with any feeling can kill a roe without a pang of regret, though his natural instinct, as an animal of prey, leads him on to hunt and kill another roe an hour afterwards.

Feb. 8 (1848).—I shot a female pochard to-day, one out of a large flock : the rest, of course, all flew away. But presently a male bird, probably the mate of the one I had killed, came flying back from the lake to which the flock had gone, and after passing once or twice low over the place where I had shot her, he pitched on the water and swam about, searching eagerly for his lost companion. He then went off to the flock again ; but soon returned a second time to look for the hen. Three times did he go and return in the same manner till at last he seemed to give it up as hopeless.

I have observed the same attachment to their mates in common wild ducks, teal, swans, etc., as well as in many other birds. I remember a hen grouse being caught by the leg in a common vermin trap which had been set for ravens. It happened that the trap was not looked at till late the following day, when we found that the cock grouse had brought and laid close to his unfortunate mate a quantity of young heather shoots : they were enough to have nearly filled a hat, and the poor bird must have been employed many hours in collecting them. I cannot express how grieved I was at the hen having been caught.

The pochard (*Nyroca ferina*) is not uncommon during the winter on Loch Spynie, Lochlee, and other large pieces of water. They arrive with the first cold or stormy weather, and remain till spring. On Lochlee I saw a pair of pochards late in the

spring, after the rest of the wild-fowl had left this country. In due time the pair was increased to a small company, apparently a brood, and I have no doubt that they had been bred in the vicinity of the loch. I had reason to believe that one of the original pair was a tame one which had escaped from my yard. I never on any other occasion saw the pochard during the breeding season in this country. It is a very active, quiet bird in the water, and dives rapidly. Indeed, the pochard feeds wholly under the water, and it is amusing to watch them when feeding, one after the other disappearing until perhaps not one bird is visible, then suddenly the whole surface is again alive with them. On the wing the pochard flies with great swiftness, making very rapid strokes with its short wings, which are small in proportion to the body. They keep in a compact flock during their flight, and before leaving a piece of water they fly several times to and fro, wheeling quickly, and increasing their height, when, if much frightened, they betake themselves to the sea. It is not a very wild or wary bird, and swimming as well as flying in close ranks, the pochard affords a good shot to the sportsman. Although a diving bird, it is excellent for the table, free from all strong flavour. It is a round, plump bird, and swims high in the water. I have often observed a peculiarity in this bird when dead, which is its extreme heaviness in proportion to its appearance. The pochard is easily tamed, and soon becomes familiar. Its head and neck are of a red brown or chestnut colour; breast and upper part of the shoulders black. The lower part of the bird, and also the back, are finely pencilled with gray. The bill and legs are lead colour. The eye is very peculiar, the irides being of a bright blood-red, unlike the eye of any other bird with which I am acquainted. The pochard has no speculum or bright bar on the wing; altogether it has a gray, half-mourning look. The female is similarly marked, but of a less decided colour, and a more dingy hue. The egg is white, tinged with green.

Feb. 9 (1847).—Very severe frost, much snow and drift.

The fieldfares come down in great numbers to the fields to feed on the Swedish turnips, and I was much astonished at the great damage done by them to the roots. I watched some of the birds digging at the turnips with their bills, and chipping and scooping out great pieces ;—thus destroying half the crop at least by letting the frost into the roots. On shooting some of the birds, I found them quite unfit for food from the rankness of their smell, which resembled that of rotten turnips, otherwise they were not only in good condition but quite fat. The whole bay and all the streams and springs are so filled up with drift snow, and ice, that there was not a single duck of any sort to be seen, with the exception of one morillon who had found out about six feet square of open water in the burn. On being flushed from this he flew a long distance up the stream in search of some other opening, but not finding any, came back, and plumped down into the same place close to me, and there I left him.

The widgeons leave the bay, which is nearly covered with ice, and feed on the clover fields, digging under the snow with their bills to get at the herbage. I never saw them do so before in this county ; indeed it is very seldom that the snow in Morayshire remains long enough on the ground, at least in the district near the sea, to annoy the wild fowl to any extent.

While the snow is newly fallen and soft, the rabbits seldom go fifty yards from their seat of the day before, and constantly return to the same bush.

Feb. 8 (1852).—The large-headed field-mice, which are very destructive to many plants in the garden, such as pinks and carnations, cabbage plants, stocks, French beans, young sweet peas, etc., do not seem to come out of their holes in the walls much in the wet weather ; these mice also peel the ash branches, the young pink thorns, etc., which grow on the old walls. The best bait for them seems to be pieces of apple, as they appear to be quite vegetable eaters.

No animal seems to have a quicker sense of smell than the

guinea-pig. The moment that any apple or other food that they are fond of is put down in the yard, they smell it out at the distance of thirty or forty feet, and all come out of their hiding-places to it. They are very fond of branches of holly, eating both bark and leaves greedily ; when fed with winter greens of any kind, they prefer the half-withered leaves to those quite green.

Deer, rabbits, etc., in the same way peel carefully branches of Scotch fir which have been cut for several days, but will not eat the peel of fresh trees of the same kind.

I heard from Mr. Cheape (Feb. 10, 1849), who was to get some wild cats for me. He has been for two months unable to move, and is still in the same situation. Having been thirteen hours up to his knees in snow, and frequently during the time tumbling into holes of water—he came home frozen as to his feet, and desired his servant to bring a pail of water to thaw his trousers and feet. The man brought a pail of hot water, which Cheape not observing, put his feet in, and in consequence they were frost-bitten immediately. He sent to Edinburgh for Professor Syme, who immediately cut off three of his toes to save his leg or life.

Feb. 11 (1847).—Saw to-day what I never observed before, a flock of eleven wrens together.

Feb. 12 (1847).—I find many wood-pigeons that I kill have the upper part of their bills and their feet covered with warty excrescences, especially the later young birds of this season. Those who take this disease are generally weak and thin.

Feb. 12 (1852).—Fine and warm. Blackbirds now sing in the garden early in the morning, and the larks all day. I saw two merlins to-day flying round and after each other, and uttering their spring cry. A water-ouzel in the Lossie was singing this morning, and chasing another bird of the same kind, apparently a female, not being so black as the one that was singing. They frequently both dropped into the water, and dived for a short time. The song is very musical and pleasing, though short.

Feb. 13 (1853).—I never saw so severe a snow-storm, every-

thing is covered and quite white ; no wheels can move. How the poor birds live, I don't know. The snow will doubtless soon go, and, in all probability, the weather will be cleared and fine sunshine after it. To-day, indeed, is the finest and most beautiful day I ever saw, although all is white. The river itself is snowed up, and we only shot some common mallards, and a lovely little merlin.

In the middle of February the peewits begin to appear here. The exact day depends chiefly on the state of the weather : the first break up of the snow and ice generally brings them. About the same time I hear the coo of the wood-pigeons, who now come near the house for protection. This they do every year as the breeding season approaches.

Three otters are frequenting the mouth of the river, apparently fishing for the flounders left in the pools near the sea. The keeper is pretty sure of catching them by putting traps at the places where they leave the water on their way up the stream after fishing. Whilst going *down*, the otter seldom leaves the water at all ; but unintermittingly fishes his way to the sea : coming up, he takes the land at all the rapids and strong streams.

Two rather singular and yet similar things happened to me one day whilst I was wild-fowl shooting. I shot at a mallard, a considerable distance from me, and evidently struck him, as after flying some distance to windward he pitched in a grass field : but on my approach he rose again and went at a great height down wind towards the sea. I happened to keep my glass on him, and when he was about a quarter of a mile off I saw him turn over in the air and fall. On coming up to the place I found the bird quite alive, but with his wing broken close to the body. The shot must have struck the bone without breaking it. The singular part of the affair was that the bird could battle against strong wind for at least a quarter of a mile without the injured bone giving way. In the evening we went to wait at a pool for ducks. Just as it got dark a rush-

ing noise was heard, and a pair of swans skimmed rapidly over the old keeper's head, and pitched in the water, making a monstrous wave. They did not see 'us, and immediately began to feed. It was getting dark, and the old man, not wishing to lose a chance, got up from his hiding-place and ran quickly to the water's edge, firing both barrels at the largest bird as it flew away. His gun was only loaded with No. 3, and the distance, as we afterwards found, was above forty yards. Both the swans flew on for some distance, until we saw the wing of one suddenly give way, and down came the bird into the pool, which was of considerable size, although shallow. I had left my retriever at home to rest, and before I could stop him, in went the old man, and then began a chase which I have seldom seen equalled. Although the water was shallow, the bottom was uneven; and every minute down went Donald head foremost. I called to him to let me shoot the bird, and leave it to drift to the shore; but all in vain. On he went, tumbling over and over, and the swan swimming and struggling in the water close to him, making an immense splashing and noise. They got quite away from me; and I had nothing left but to sit down and watch the chase as well as I could through the increasing darkness. At last he hemmed the bird into a rushy corner of the loch, and caught her. But this was no sooner done, than the swan, by flapping and struggling, tripped him up; and got away again, leaving her antagonist flat in the water. Then, and not till then, he began to load his gun, which he had to my great wonderment contrived to carry all the time high over his head; but, of course, notwithstanding all his care, it had got wet and would not go off, and the conflict ended at last by a lucky blow from the barrels which stunned the swan. I was amused at the boyish eagerness of so old a stager; particularly as we never lost a shot at ducks or anything else without his laying it to my fault—I "had lifted my head too high," or done something else shewing my want of tact. The poor fellow was in a sad plight, being wet to the skin with half-frozen water. However, I made

him walk quickly home, and he took no damage from his exploit. The swan weighed 18 lbs., and measured above seven feet from tip to tip. We found that many shots had struck the wing feathers without breaking them.

Feb. 15(1847).—Rode to Gordonstoun and shot ducks with Sir Alexander Gordon Cumming, at the Loch of Spynie, which I consider to be about the best loch in the North for wild-fowl shooting. Its situation is excellent; and being for the most part shallow, and covered with grass, rushes, and tall reeds, it is perfectly adapted in every way for sheltering and feeding all sorts of wild-fowl, and they resort there in incredible numbers, and of every kind from the swan to the teal. To-day we saw immense numbers of mallard and widgeon, and some pochards, pintail ducks, and teal. Besides these birds there were flocks of coots, and numbers of moor-hens, etc. One swan only is at present on the loch, which, from its half-frozen state, is not in good condition for wild-fowl. In the dusk we took up positions near some fields where the potatoes had not been raised, in consequence of the disease in this plant. Here we killed several mallards and ducks, as they feed constantly on the half-rotten potatoes.

(16th.)—Shot wild-fowl again at the loch; there seems to be an immense proportion of drakes amongst the widgeon. These birds have begun to pair, and flew about towards evening in pairs. We placed ourselves this evening at dusk in the line of flight taken by the widgeon from the loch to their feeding places in the grass fields, bordering the water's edge. The birds flew in as fast as the flocks could succeed each other, sometimes in small companies and sometimes in pairs. When they first rise, and before we can see them, we hear their peculiar whistle; and they almost immediately appear flying in small companies with great swiftness to their destination. This whistling sound, which they utter during their flight, is quite different from their cry while swimming and playing on the water. I shot five birds myself as they passed, all drakes; out of ten widgeon which we killed this evening only one was a duck. It requires a very

quick eye and good retriever to bag many birds in this twilight shooting; but Cumming killed fourteen mallards and a widgeon, in 19 shots, one evening while I was there. This was excellent work, considering that it was only for a short time during the dusk that he could shoot, that they were all single shots, and that every bird had to be retrieved out of water overgrown with rushes, etc. The widgeon are particularly good eating, and free from any fishy or weedy flavour on this loch, owing to their feeding so much on the grass fields near the edge.

The rooks begin to collect on the ash trees at Gordonstoun, where they breed, making a great noise in the morning. I also heard the spring cry of the kestrel hawk.

February 18 (1847). The widgeon are now in full plumage, excepting a few backward or wounded birds. I saw a peewit to-day, though no flocks have appeared as yet.

(19th and 20th.)—Thrushes and larks begin to sing. Saw a small flock of peewits on the island. Saw also a pair of crested cormorants, at least I consider the birds which I saw to be of their kind. They had the white mark on the hip, and appeared to be different from the cormorants which I usually see here, being both of a darker colour, and of a stouter and heavier shape.

Towards the end of February whenever the ground is soft the badgers leave their holes, and wander far and near, digging up the ground like pigs, in the fields as well as in the woods.

Wild cats are brindled gray, and I have observed that domestic cats of that colour are more inclined to take to the woods and hunt for themselves than others. When they do so they grow very large, and are most destructive to game of all kinds. A large cat of this colour found out some tame rabbits belonging to my boys, and killed several of them. At last we saw him come out of a hole where some white rabbits were breeding; and he was shot. The brute had evidently been living on them for some time. I first discovered that he

was in the hole by the old rabbits showing alarm, watching the mouth of the hole with erect ears.

At this season the bean goose and the pink-footed goose feed very much on a coarse reddish brown grass which grows in swamps and the peat mosses, and which is very succulent. They pull it up and eat the root, which is somewhat bulbous shaped. While feeding on it they become very heavy and fat, and have no strong or disagreeable flavour.

Though these two kinds of geese both feed and fly together, still while on wing and while on the ground they keep somewhat apart. The bean geese are far the most numerous; but there is generally a small company of the pink-footed kind with them, and no one but a close observer would perceive that they do not associate as closely as if they all belonged to one family.

The bean goose (*Anser segetum*) visits us both in autumn and spring. Their stay in autumn is very short, stopping only to rest while on their passage from their breeding places in the far North to the more genial shores of the South. They come generally about the beginning of October, but vary according to the weather. The first gales and rough weather about that time generally bring them. They pass over in immense flocks, stopping only for a night or two in some quiet swamp or bay. Their visits in the spring are, however, far more regular. As soon as the first oats are sown in the flat plains of Moray, a squadron of bean geese appear, and seems to reconnoitre the ground as an advance guard. This generally takes place about 10th or 12th March. In a day or two their number increases, and large flocks seem to arrive daily. In the night time they rest in the Bay of Findhorn. But at early dawn they divide into flocks and betake themselves to their respective feeding places. They prefer light soil where they can walk easily and with freedom, from one end of the field to the other, in search of the grains of corn which remain uncovered. Oats are their first food; but barley is also laid under contribution, particularly

when the grain has been a few days on the ground and begins to swell. They are also particularly fond of peas and beans. They like these also when beginning to swell and sprout. Near Nairn I found the bean goose feeding during nearly the whole winter on the coarse grass already mentioned. Few, however, of this species remain during the winter. I have elsewhere spoken of their extreme wariness, and of the difficulty of approaching these geese, a wariness which may fully account for the saying of a "wild goose chase." After feeding in the fields, in the morning, the geese either retire to the bay or to some quiet hill-side or marsh where they wash and rest themselves. About three o'clock they again feed, and towards dark all return to the bog, often coming many miles. This goose is smaller than the gray-lag goose (*Anser ferus*). It is also easily distinguished from it even when on wing, as the *Anser ferus* shews pale blue or ash-coloured marks very conspicuously. The bean goose too has a smaller head. The nail of the bill is black, and the feet of an orange colour. It is also a more active-looking bird in all its movements than the gray-lag. I never found an instance of this bird breeding with the tame goose.

The pink-footed goose (*Anser brachyrhynchus*) visits us regularly at the same time as the bean goose. The plumage of both birds is very much the same. The pink-footed goose, however, is a finer bird, and more distinctly shaded and marked than the bean goose. The general colour of the plumage is lighter. When a flock of bean geese alight on a field to feed, it may be observed that a small company of the birds often separate and feed alone; these will be found to be the pink-footed. I have also killed them when feeding alone without any bean geese with them.

A wounded brant goose (*Bernicla brenta*), which I brought home, very soon became tame, and fed fearlessly close to us; indeed, I have frequently observed this inclination to tameness in this beautiful kind of goose. These birds come in great numbers early in the winter. In the first week in October, or

even as early as the end of September, they begin to appear, and their numbers increase apparently till the end of their season here, which is at the end of April, and sometimes the first week of May. During March they are very numerous on the grassy parts of the sea-shore, and as the tide recedes they land in large flocks to feed on the herbage which is left uncovered. There is a kind of short grass in the sheltered bays on parts of this coast, which at high water is covered, but which is bare at low tide, and this seems to commence throwing out young shoots early in March. The brent geese are very fond of this, and leave the bay of Cromarty and other places where they have fed during the winter on the roots of the long waving sea-grass, in order to feed on this young short herbage which the ebb tide leaves uncovered here. When feeding they walk very close together, and great numbers may be killed at a shot. They are, however, very wary, and, like the bean geese, always have some of their number on the watch. Their loud peculiar cry is wild and musical, resembling a pack of hounds in full cry. As they pass over head during a still night it is very striking. The flesh is excellent at all times while in this country, and quite free from any rank flavour. If caught or winged the brent goose grows tame and familiar immediately, and will live in the poultry-yard, feeding on any food given to the fowls. The brent is a handsomely-formed bird, and light and active in its movements. The prevailing colour of the plumage is dark brown and ash. The head and neck black, with a white band on the latter. The lower part of the plumage is altogether lighter than the upper. The head is small and finely shaped. The bill small and black, as are the legs and feet. It is a bold, strong swimmer, and when wounded takes direct out to the roughest part of the water. If only winged, few retrievers can overtake them in that element. The best time to get at the brent goose is at the first part of the ebb, when they repair to their feeding places, which they do very regularly at every tide. I have frequently seen them feeding on the green wheat towards

the spring time ; but I never saw them eating grain. They also seem fond of coming to the mouth of any small stream which may run into the bays, and of drinking the fresh water.

Feb. 23 (1854).—Rennie sent me two wild swans—Bewick's swan—weight of one, 17 lbs., width, 68 inches ; the other, 16 lbs., width, 60 inches ; they were killed at Lochlee. In skinning the swan, I was much struck with the immense quantity of fat all over the body. The quill feathers are so strong, that although several of them had been struck with No. 1 shot, they were not penetrated.

Feb. 25 (1853).—Shot some mallard in the river, but they are so lean at last that I have given up killing them ; ditto snipes. Woodcocks quite disappeared.

There is scarcely a field or piece of open ground which is not frequented by the skylark (*Alauda arvensis*). They are most numerous during February and March, and in the beginning of winter. During the first snow-storms of the season I have sometimes happened to be on the sea-shore, and all day a constant stream of larks seemed to be coming straight in from the north-east—not coming in compact bodies, but singly and in scattered, yet constant flocks. On these occasions they do not fly high, but drift along not many yards above the water. I observe that the larks generally begin to sing in the first week of February, though no exact rule can be laid down, as this depends much on the weather. The skylark, as Milton knew, is the bird which sings earliest in the morning. Before the sun is up, I often hear the lark singing over my head before there is light enough to distinguish it. Late in the summer evening too, after all is still, and apparently the birds have all retired to their roosting places, I have observed how suddenly every lark rises and sings for a short time, as if their evening hymn, and as suddenly and simultaneously all cease.* The nest is placed on the ground. It is carelessly made, fitting into some hollow

* A friend tells me, in Shetland the skylark may be heard singing as late as twelve in the month of June.—ED.

made by the hoof of a horse or cow, or in some similar inequality. The eggs are of brown olive green, blotched and shaded with darker brown and ash colour. The lark feeds on insects, small grain, clover, and, in hard weather, on turnip leaves.

The tit-lark (*Anthus pratensis*), though not so numerous as the skylark, is still very abundant, and may be seen on every moor and on every hill side, as well as in cultivated places, though waste and barren grounds seem to be its favourite resort. Its song is trifling and without richness, but it is a lively little bird, and constantly uttering its tune, such as it is. It builds on the ground in heather or in close herbage. The eggs are not unlike the sky-lark, but smaller and more inclined to brown than olive colour.

The rock-pipit (*Anthus obscurus*), rather a larger bird than the tit-lark, though similar to it in many respects. It inhabits the sea-shore, and is tolerably numerous along the rocky parts of the coast, such as Cove-sea, etc. It is of a deeper olive greenish brown than the other larks, and has a fine large full eye, of a dark hazel. At a short distance it is easy to distinguish it from the tit-lark, though the latter frequents the sea-coast in considerable abundance. I never found the nest. According to Mr. Jennings, the egg is of a "greenish white ground, speckled with ash brown, darkest at the larger end." I never saw the rock-lark inland; it appears to remain wholly on the coast, feeding principally on the insects which it finds on the sea-weed.

The raven (*Corvus corax*) is now a rare bird in this immediate district. Not many years since it had several breeding places both on the sea-coast and also in some rocky cliffs inland, but traps and increase of population have driven it away to the higher grounds. I occasionally, during the winter season, see a pair or single bird pass over my head. Where not much disturbed, the raven will breed in the same spot for many years in succession, adding to and repairing the old nest. Its usual building place is on some lofty cliff, where it fixes on a situation protected

by projections of rocks, both from above and below. In England I have found the nest in a lofty tree ; and then, it fixes on a tree the most difficult to climb in the neighbourhood, and remains constant to the same nest every year. The nest is formed of large sticks outwardly, and lined with a great quantity of wool, hair, soft grass, etc. The principal food of the raven consists of carrion and dead fish, but it will eat almost anything, animal or vegetable, which comes in its way. It is easily tamed, and is very amusing as a pet, owing to its quaint habits and tricks ; but its strong and powerful bill, which it uses on slight provocation, makes it rather a dangerous inmate where there are children. The egg of the raven is of a dingy green colour, much spotted with brown. It breeds very early, the old bird often sitting on her eggs in the midst of snow and storm. They have eggs sometimes in February.

The instinct of the raven in discovering dead bodies of large animals is wonderful, and very difficult to understand. It appears, however, to be guided both by scent and eyesight, according to circumstances, assisted by an instinct seen in many animals, made use of in different ways, and most difficult to account for. It can neither be scent nor eyesight which enables the carrier-pigeon to return straight home two or three hundred miles ; or by which the dog, or even the cat, finds its way home in an almost direct line by roads which it has never seen, and after having been carried from its starting point in a bag, the back of a carriage, or in some way which would render it impossible for the animal to have seen a yard of the road by which it left home. There is undoubtedly some equally strong instinct which enables many birds to find out their food from great distances. I frequently see, not only ravens, but buzzards, and other birds of similar habits, congregating round the dead body of an animal almost immediately after it has ceased to live ; and therefore I cannot agree with those naturalists who assert that it is the sense of smelling alone which leads these birds to their feast. From my own observation I am con-

vinced that this is not the case, as I have known half a dozen buzzards collect round a dead cat on the afternoon of the day on which it had been killed, and this, too, during the winter season, when the dead animal could have emitted no odour strong enough to attract its devourers. I am far more inclined to attribute their facility in finding out their food to a quick sense of sight. For the sake of catching these birds and the gray crows also, I used to have the dead vermin thrown out into a field near the house where traps were placed round them. When the cats were skinned, and therefore were the more conspicuous, the carrion birds usually found them out the same afternoon. Now buzzards, ravens, and other birds who feed on carrion, are in the habit of frequently soaring for hours together, at an immense height in the air, wheeling round and round in wide circles. I have no doubt that at these times they are searching with their keen and far-seeing eye for carcasses and other substances fit for food. The eagle, who also feeds on dead bodies, wheels and circles in a similar manner, at such a height in the air that he frequently looks like a mere speck in the sky. There can be no doubt that it is upon his eye only that he depends. When, even at this vast height, his quick eye catches sight of a grouse in the heather, down drops the bird of prey as if shot, till within some thirty yards of the ground, when suddenly stopping his downward course, he again hovers stationary over the grouse, till a fair opportunity offers for a swoop. I have often seen the eagle do this ; and he has sometimes discovered the grouse from a height and distance so great as to make it appear impossible that any eye should have distinguished so small an object.

It is certain, however, that birds have a tolerably acute sense of smelling, although I know that it has been positively denied that ducks are guided by their scenting powers in taking alarm, and that it is by their quick sense of hearing *only* that they are warned of the approach of danger. But this I utterly deny ; for I have constantly seen wild-fowl, when I have been

sitting perfectly motionless in an ambuscade, swim quietly towards me without a suspicion of my vicinity, till coming to that point where my place of concealment was directly to windward of them, they immediately caught the scent, took wing, and flew off in as great alarm as if I had stood up in full view. The same thing has occurred very frequently when I have been in pursuit of geese; the birds invariably taking alarm as soon as they come in a line with me and the wind, and just as much so when I was motionless and not making the slightest noise, as when I was creeping towards them. The same sense of smelling doubtless guides birds, in many cases, to their food, but it is certainly not the sole or even the principal guide of the raven nor of the eagle.

When one of the carrion-birds has found a booty, others of the same species, who may be wheeling about at a greater distance, at once see by his manner of flight and other signs that he has made some discovery, and immediately follow in the same direction, that they may come in for their share.

In like manner, when one wild duck has found out a quantity of corn, thrown down in any particular place, he soon brings others to the spot, and these again give information to others, until at length large flocks collect to feed on what was originally the prize of a single bird. I do not mean to infer that they can communicate to each other by any bird-language the existence and locality of the prize found; but they all go to the spot attracted by the manner of flight of the first discoverers, which doubtless tells their companions most plainly that they are winging their way advisedly towards a depôt of food, and not going forth on a vague and uncertain search.

The clamour of crows when they find a prize tells the tale at once to all within hearing, and not to those of their own kind only, but to all ravens or rooks in the neighbourhood.

In the same manner birds communicate alarm and warning, not only to those of their own species, but also to others. Often has the cry of a crow, who has suddenly while passing

over my head discovered my hiding-place, caused a flock of geese or other wild-fowl to take wing, as if they themselves had seen me ; and many a shot have I lost by the cries of peewits and other birds.

I have often been led to think that, when different kinds of wild-fowl were feeding in a quiet place, the mallards and widgeon have taken no heed to their own security as long as there were either curlews or red-shanks feeding near them ; being apparently quite satisfied that these vigilant and noisy birds were sufficiently watchful sentinels to warn them on the first approach of danger.

A stag takes warning from the alarm-note of the grouse or plover as quickly as if he had himself seen an enemy, and from the manner of the bird's flight he knows pretty accurately where the danger lies. In getting up to deer it has more than once happened that I have had either to lie motionless for a long time, or to make a considerable circuit, to avoid putting up a cock-grouse, who, eyeing my serpentine movements with suspicion, has been ready to rise with his loud cry of alarm had I approached a yard nearer to him. In fact there is a language of signs and observation carried on between animals of different kinds, which is as perfectly understood by them as if they could communicate by words.

It is difficult to determine how far we are right in endeavouring utterly to destroy one kind of animal or bird in order to increase another species. Nature, if left to herself, keeps up a fair equilibrium and proportion amongst all her productions ; and, without doubt, if the world were left to itself without the interference of mankind, there would never be an undue proportion of any one kind of living creature : the birds of prey would keep the granivorous birds from increasing till they devoured all the fruits of the earth ; and the carnivorous birds and beasts would never entirely extirpate any other species, as their own numbers would be lessened by want of food before this could happen ; besides which, we see that unless artificial

means are resorted to, the number of living animals always bears proportion to, and is regulated by, the supply of food which offers itself; and, as these supplies fail, there is a natural tendency in the consumers to cease increasing, or to betake themselves to other regions. But when man comes in as an active agent, he gradually extirpates all beasts and birds of prey for the purpose of protecting and causing to increase the weaker but more useful animals and birds. In this country, for instance, we can no more allow hawks and crows, foxes and weasels, to flourish and increase, however picturesque and beautiful they may be, than we could allow poppies or other useless but ornamental wild flowers to overrun our corn-fields.

A pair of peregrine falcons take possession of a rock—they will issue out as regularly as the morning appears, to search for grouse, partridges, or other birds which form the food of man. It is the same with other hawks; and we well know that crows destroy more game than all the shooters in the kingdom. It is therefore necessary to keep down the numbers of these marauders.

I cannot say, however, that I am at all anxious to see our island entirely clear of what game-preservers call "vermin." There is more beauty and more to interest one in the flight and habits of a pair of falcons than in a whole pack of grouse; and I regret to see how rare these birds, and eagles, and many others, are daily becoming, under the influence of traps, poison, and guns. The edict which has gone forth against them is far too comprehensive and sweeping, and many innocent birds go to swell the gamekeeper's list of "vermin."

One advantage certainly results from birds of prey being killed off: blackbirds, thrushes, and numerous other beautiful little birds, increase in proportion as their enemies are destroyed. In several districts where, a few years ago, these birds were very rare, they are now abundant. The ring-ouzel, too, is one of the birds who has benefited by this destruction of its enemies. There are some other birds, such as the wheat-ear and tit-lark, who are seldom killed by a hawk, but whose nests and young

are the constant prey of weasels and other ground-vermin. These also have good reason to thank the trapper. Wood-pigeons, whose eggs were formerly taken by the crows and magpies in great numbers, and whose young served to feed many kinds of hawks, now increase yearly, and begin to be a subject of great complaint amongst farmers ; and yet the wood-pigeon during a great part of the year feeds on the seeds of many weeds and plants useless or mischievous.

The eggs of birds are in general more or less concealed from their enemies, either by the nest being similar in colour to the surrounding substances, or by its situation ; but the eggs of the wood-pigeon are particularly exposed to the attacks of crows, magpies, etc. Their young, too, are constantly stolen out of the nest by hawks and owls. It is a singular circumstance connected with the "table arrangements" of these birds of prey, that they never carry off the young wood-pigeons till they are nearly fledged and ready to fly.

The ptarmigan's chance of escape from birds of prey is much better : they are exactly the colour of the stones in summer, and of the snow in winter, and change their colour as that of their abiding place is altered. The grouse is as nearly the colour of the brown heather as it is possible for a bird to be ; his bright eye and red comb are the only discoverable points about him when he is crouched in it. The blackcock's usual haunt is in lower situations, and he delights in the peat-moss where the ground is nearly as black as his own plumage. The partridge and quail are exactly similar in colour to the dried grass or stubble, and the quickest eye can seldom see them on the ground when crouched, and not erect or moving about to feed. The pheasant's colour very nearly resembles the dead leaves of the wood and coppice, which are his favourite haunts.

The owl sits securely close to the trunk of a forest-tree, her mottled-brown plumage being in colour very like the bark of the trunk beside which she is perched. The peregrine-falcon, with her blue-gray feathers, can scarcely be distinguished from

the lichen-covered crag, where she sits for hours together as motionless as the rock itself. The eagle sits upright on some cliff of the same colour as himself, huddled up into a shape which only the experienced eye detects to be that of a bird. The attitudes and figures of the whole tribe of hawks are very striking and characteristic, and as unlike as possible to the stuffed caricatures which one usually meets with, and in which the natural character of the bird is entirely lost.

In addition to the protection which similarity of colour affords to animals, they have a natural instinct which leads them to choose such places of rest as, from the nature of the surrounding objects, are the best fitted to conceal them. The hare, for instance, makes her form amongst gray stones much of her own size and colour; and birds which are much persecuted do the same. The larger size of red-deer obliges them to depend rather on the inaccessibility of their resting-places than on any attempt at concealment; and the roe-buck's safety is in the denseness and roughness of the wood in which it lies.

There is some powerful instinct, also, which assists animals in finding their food; and many go direct from great distances to places where it is found. Pigeons find out newly-sown peas and favourite grains almost immediately after they have been put into the ground; and will frequently fly several miles to a field the very first morning after it is sown. Wild ducks, also, whose researches can only be made by night, are equally quick in finding places where there is plenty of any favourite food. The small gulls, particularly the black-headed gull, discover the ploughman before he has finished his first furrow, and collect in great flocks to pick up every grub or worm which he turns up. The rapid gathering of birds which feed on carrion has been alluded to already. In fact all birds, whatever their food may be, have an instinctive power of discovering it immediately, and that from such great distances as to baffle all attempt at explanation. In the mountainous districts of Sutherland and others of the northern counties, the red-deer knows

the exact time when the shepherd's patch of corn and potatoes is fit for his food, and will sometimes come down in such numbers as to eat up and destroy the entire crop in a single night; or if the cultivated ground be extensive, they will repeat their visit in spite of all attempts to drive them away; and the cleverness they display in taking advantage of every unguarded moment is quite astonishing. It is curious to see these animals depending entirely on their own resources and cunning in avoiding danger, in spite of their natural timidity, coming fearlessly down to the very door of a cottage to feed on their favourite food, and frequently from very considerable distances; and even after the oats are cut and set up in sheaves, I have seen red-deer with astonishing boldness manage to appropriate to themselves no inconsiderable share of the ripe corn.

All the deer tribe soon find out when danger ceases. In a domesticated state no animal becomes more fearless and bold than a stag; and in proportion as they become so, they are dangerous to strangers, whom they attack with great fierceness. They have, however, discrimination enough to assault women more frequently than men, being evidently aware that they are less able to resist. Even a roebuck, when tamed, will do this; and his activity and strength render him no contemptible antagonist. A roe, though so beautiful an animal, is a most unsatisfactory pet; as they either become dangerous as they become tame, or else take to the woods and are killed, their instinctive knowledge of danger having apparently deserted them.

There are plenty of herons (*Ardea cinerea*) here (1850), but I never shoot them unless some friend wants them for flies. A wounded heron (numbers of which I have seen) appears to be quite impotent as to legs and wings, and to put all his trust and defence in his bill. His crest is erected, and he curves back his long snake-like neck to strike the harder; his eye is particularly fierce-looking, and looks very forward and not sideways; he tumbles down with his long legs stretched helplessly out, his wings open, and his eye, neck, and bill only in

action. The only breeding-place for herons in this county is at Darnaway, on the Findhorn, where for many years they have occupied a most picturesque spot on the river Findhorn. I am afraid that the jackdaws, and also the rooks, which of late years have established a large settlement close to the heronry, will in time drive the herons completely away. They now destroy great numbers of their eggs.* There is a heronry on the rocks of the

* This prediction has unfortunately been fulfilled. "The heronry," situated on a low wooded point of the Darnaway forest, under and opposite the bold cliff of Altyre, forming one of the most peculiar and attractive points of the picturesque scenery of the Findhorn, has this season (1863) come to its fated end. I am told a few pairs of the noble birds, old colonists, and loving their old nests, shewed some intention of settling there this spring, but the tribes of thievish rooks, and impudent daws, were too disgusting; and the whole nation of herons, having no doubt debated the matter in a full parliament, have moved some miles off, and appear to have made a permanent settlement near the mouth of "the muckle burn," which falls into the basin of the Findhorn between Moy and Kincorth. The situation is not so picturesque as their former *habitat*, but, in a utilitarian age, the trout of the burn and the flounders of the basin might weigh against any poetical considerations.

It is worth while correcting a common error of Moray folk, who suppose the heronry to have occupied its picturesque site under the rocks of Altyre for immemorial time. This is not so. Lord Moray informs me, that the first notice of the heronry he has found among his family papers, is a letter from the late Sir William Cumming to the late Lord Moray (the present Earl's father), calling his Lordship's attention to a few herons having been seen among the trees on the river bank, as if intending to nest, and asking him to direct the keepers to protect them.—C. I.

We must make room for another note on this subject. Sir A. G. Cumming of Altyre, who has seen these sheets in proof, is good enough to furnish the following particulars:—

"May 12, 1863.—This far-famed heronry has, during the last ten years, been gradually and perceptibly diminishing in numbers, from the increase of the rooks and jackdaws, who maintain an incessant war on the eggs of the herons, and at present there is not a pair of the latter to be seen. The nests were reduced this year to six or seven in April, when the Earl of Moray and I adopted very active measures for the extermination of the crows and jackdaws. In the accomplishment of this, the few remaining herons have deserted the spot for this season, but it is to be hoped that next year they will again return, and gradually increase to their former numbers."

sea-coast, on the opposite shore of Ross-shire, and a few also breed near the Little Ferry in Sutherland.

The heron is a very early bird in nesting, but the young birds seem to remain a long time in the nest after they are fledged. The old birds must fly long distances for their food during the nesting time. A heron which we killed at Spynie, when opened, had in her body an egg with the shell quite hard, and ready to be laid, although the distance to the heronry is fully sixteen miles. They feed on eels, frogs, fish of all sorts, frequently swallowing, to their apparent great inconvenience, flounders of a tolerable size. We have scarcely a handsomer bird than an old heron in full plumage; there is a peculiar blending and harmony in the colours which is very striking. He is always, too, a picturesque object, whether flapping slowly above your head, or standing motionless and erect in a solitary stream, waiting patiently for his prey. The female heron is little different from the male. The crest is slightly shorter, as indeed are the bill and head; the plumage otherwise is much the same. The young bird, however, is very inferior in colour, as well as size and weight, for the first year. The heron is by no means so lean a bird as is supposed. His limbs are long, and his body small in proportion, but he is often covered with fat. The rapidity and force with which a heron strikes with his bill is great, and when wounded, great care should be taken in approaching one, as they invariably strike at the face. When fish are not easily procured, the heron does not hesitate to swallow young ducks, coots, etc. which may swim near him, as he stands motionless and unobserved amongst the rushes; indeed, rats or mice do not escape. The nest is large, made of sticks, and lined with coarse grass. It is very flat, without much depression for the eggs. These are of a pale uniform green. The heron, as I have already remarked, alights on trees with far greater facility than would be supposed from the shape of the bird and of its feet.

CHAPTER THE THIRD.

MARCH.

March 1 (1847).—I drove over to Gordonstoun to shoot ducks on Spynie. I was much amused and interested by seeing the immense flocks of wild fowl that were congregated on and about the loch. The teal kept up a constant whistling during the whole day, so did the widgeon; all the different ducks were pairing, and although on the water they appeared to be one confused mass, as soon as they rose, I observed they all flew to and fro in pairs—even in the great flights, as they passed from one end of the loch to the other, every flock was subdivided into pairs, which had a very curious effect in the air. I do not know a prettier sight than a vast number of water-fowl such as I saw to-day, filling the water and the air above it, and uttering their various cries. The coot's manner of rising is very peculiar, flapping and running along the water for twenty yards before he gets well on wing, making a great noise, and sending the water in all directions around him. Once on wing, the coot has a great resemblance to a black-cock in manner of flight, etc. On the water this bird swims very high, giving one the idea of a blackened bladder floating about. The widgeon, on the contrary, swims very flat and low in the water, but on wing is quick and sharp in its movements. The teal has a sudden and rapid, but unsteady flight.

There are a great many marks of otters about the loch. I conclude that they find plenty of flounders and eels in the muddy ditches and canals. The otters about Spynie sit in the rushes on the small islands, making seats like those of a hare.

The keeper caught a beautiful male pochard which had been

wounded somewhere in the body, but apparently was not much hurt, although disabled from flying. I took it home with me alive, and turned it into a small enclosure, where it amused us much by its tameness and confidence, beginning to eat worms and porridge immediately, and seeming to enjoy itself in this new situation as much as if it had been always accustomed to it. As I have already stated, the eye of this bird is of a very peculiar blood-red colour, and has a very bold and fierce expression.

There are no enemies so destructive to the wild-fowl as the carrion or rather the hooded crow, which is the kind we have here. Eggs and young birds all come alike to these robbers ; but the keeper at Spynie manages to kill great numbers of them by poison ; he uses strychnia, a very small quantity of which kills the crow on the spot.

The carrion crow (*Corvus corone*) and the hooded crow (*Corvus cornix*.) Though the carrion crow is not supposed to be an inhabitant of this part of the country, it is almost impossible to decide upon the line which divides these two birds, the black carrion crow and the hooded crow. No doubt the hooded crow is the common species here, but I have taken some trouble in examining these birds, and have killed crows of every shade of plumage from pure black to the perfectly marked hooded crow, and this without reference to age or sex. I have also seen a perfect hooded crow paired and breeding with one quite black. There is no internal difference whatsoever in the birds. There is often considerable variety in the size both of the black and of the hooded crow. Though pairs of hooded crows are common enough, I never saw in this country nor anywhere in the north of Scotland, a pair of perfectly black carrion crows. We are therefore bound to consider the *hooded* as the crow of this country. The hooded crow breeds indiscriminately in trees and rocks, building a large nest of dry sticks lined first with grass and then with a large quantity of wool, lumps of hair, etc. The general colour of the egg is light green, covered thickly with brown

spots. They vary, however, very much in the markings, and are sometimes wholly without spots. The hooded crow is a powerful, active, and very wary bird, feeding on almost everything which comes in its way, but preferring carrion. It often feeds on shell-fish. I have frequently seen it near the sea rise to a considerable height with a mussel, and drop it on a rock in order to crack the shell, an act which amounts to reasoning.* It feeds as much on the fresh-water mussels, the shells of which not being so strong as those of the salt-water mussel, the crow is able to break open without making use of the same plan. This bird also kills newly-born lambs, picking out the eyes and tongue while the poor creature is still alive. It preys on young grouse, partridges, hares, etc. etc., and is very destructive to eggs of all sorts. In certain feeding spots in the woods I have seen the remains of eggs of the most extraordinary variety and number. No sooner does a wild duck, pheasant, or any bird leave its nest than the hooded crow is on the look out, and I have no doubt that a single pair often destroys many hundred eggs in the course of a season.† All birds seem aware of this, and peewits, gulls, red-shanks, etc., attack most furiously any crow which they see hunting near their nests. The "hoody" is also very fond of young wild ducks, and destroys great numbers. In the mountains it is bold enough to make prize of the eggs of the eagle, peregrine falcon, or osprey, if the parent birds happen to be driven off their nest. During the winter the hooded crows are more numerous

* Lord Cockburn told me he had often watched the crows at this operation on the rocks below Caroline Park, and in windy days he observed they made allowance for the effect of the wind on the "buckies" in their fall, with great accuracy.—C. I.

† It has been disputed how this bird carries such prey to its nest. This spring, 1863, Lord Ardmillan and Mr. Thomson of Balgowan, taking a *Sunday* walk near Balgowan, observed a "hoody" flying heavily loaded with something *on its bill*, and lighting in a field. They went up and scared the bird, and found it had left behind a fresh duck's egg, apparently just stolen from some poultry yard. The egg was entire, except one small hole in the shell, just large enough to admit the point of the robber's beak.—C. I.

than at other times, as they collect in the lower grounds from the forests and rocky burns where they have bred. It is probable also that some migrate from Norway and the west of Europe.

Every day now shows the approach of spring. The swans frequent one particular lake, seldom alighting on any other piece of water. This lake is peculiarly open, and very difficult of approach, which is doubtless one reason for their fixing on it; another is, that in many places it is so shallow that they can reach with their long necks the grassy plants growing at the bottom, on the roots of which plants they feed.

Day by day, at the beginning of March, the brent geese seem to increase in numbers: they feed on the grassy banks on the shores of the neck of land called the "Bar."

I heard of a falcon breeding in Glengarry. The keeper says that a very large light-coloured falcon bred at a certain rock quite different from the common peregrine, being nearly white; that it always came out making a great noise from where it had its nest, and struck at his terriers. This seems very like the Iceland bird, which is a very rare visitor. I have only known of two other instances of its being seen in this part of the kingdom. One of these birds was hunting about the Loch of Spynie and struck down a mallard very near us. This was early in the month of March. The falcon was shot at and fell, but recovered and escaped us. The other I saw a year afterwards near Elgin; and a fortnight after the time that I saw her one was killed in Ross-shire, in all probability the same. The Iceland falcon or gerfalcon (*Falco gyrfalco*) is considerably larger than the peregrine. The principal colour is white, beautifully marked with black bars and streaks, more or less thickly, according to the age of the bird. There seems to me to be a regular gradation of falcons, beginning with the Greenland falcon, the most white and beautiful of all; next comes the Iceland falcon, the Norwegian falcon, the lanner (from the east of Europe), the peregrine, the merlin, and the hobby—there being about

the same difference between the Greenland and the Iceland as between the Norwegian and the peregrine. The Iceland falcon has the same boldness and docility when trained, as the peregrine, and her superior size renders her capable of conquering any game that we have in Britain. The only way, however, of obtaining a supply of these noble birds for the purpose of falconry is to send an experienced person to Iceland with the proper nets and tackle with which to catch the birds uninjured. The Iceland and Greenland falcon have been called the same bird by many naturalists, but my friend Mr. Hancock, who has paid great attention to falcons, has so plainly shewn to me the difference and distinction between the birds in every age and of each sex, that it is perfectly clear to me that, though nearly allied, the species are quite distinct. I hope Mr. Hancock will give the public the benefit of his researches in this branch of Natural History, by publishing an account of the varieties of hawks, which he is more capable of doing than perhaps any naturalist in England.

The badgers hunt more and more every day at this season if the weather is open, and apparently they wander several miles from their home.

March 2 (1847).—I see the rooks building; they were very busy to-day carrying up sticks from every direction. This well-known bird (*Corvus frugilegus*) is common in all this district, shifting its quarters at different seasons in search of food; and immense must be the supply to feed the tens of thousands which are sometimes seen together. Their usual habits are known to most people, but it is an often discussed question whether the rook is hurtful or advantageous to the agriculturist. With regard to the mischief done by the rook, the greatest destruction of grain made by it is just as the corn ripens and before it is cut; where the grain is lodged, and at the edges of the fields, it consumes a considerable quantity, and destroys more. It also attacks the potatoes, digging up those roots which are least covered with earth. In severe weather and snow it attacks the turnips, and its powerful

bill enables it to break easily into the root. It is mischievous also if allowed to attack the stack-yard, spoiling the stacks by pulling out the straws to get at the grain. The rook is fond of eggs too, and in some rookeries egg hunting becomes their common habit, when from their great numbers they scarcely allow pheasant or partridge to hatch a brood.* This bird is also fond of cherries, strawberries, etc. To counterbalance this long list of evil, for many months of the year the rooks live wholly on grubs, caterpillars, etc., in this way doing an amount of service to the farmer which is quite incalculable, destroying his greatest and most insidious enemy. In districts where rooks have been completely expelled this has been seen by whole crops of wheat and clover being destroyed at the root by the wire worm and other enemies, which can only be effectually attacked by birds. When we consider the short time during which rooks feed on grain, and the far longer season during which they live wholly on grubs and such-like food, it will be believed by all impartial lookers-on that the rook may be set down rather as the farmer's friend than his enemy. On close observation, when the rook appears to be following the harrows for the purpose of feeding on the newly-sown wheat, it will be found that it is picking up a great quantity of large white grubs, leaving the grain untouched. Amongst its misdemeanours I forgot to mention one, namely, that in severe weather it often digs up the young wheat just as it begins to sprout above the ground. Where rooks or any other birds increase to an inordinate extent, no doubt they ought to be kept down by destroying part of their eggs or young. Where the farmer is much annoyed by their attacks on any particular field, a few shots at them soon drives them elsewhere. But very bad would be the effect of entirely banishing them from any district. In the beginning of autumn the rooks frequently betake themselves for a short time to the mountains to feed on berries which grow amongst the heather, and on several kinds of caterpillars. The nest is large, composed of

* I have poisoned 14 rooks at one pheasant's nest.—A. P. G. C.

sticks and lined with grass, wool, etc. When making its nest the rooks break off with their strong bills great quantities of twigs for the purpose from the neighbouring trees. The eggs are pale green, thickly spotted with brown, but vary much in colour.

March 3 (1847).—When at Loch Spynie yesterday we started several hares, which were lying in perfectly wet seats some distance in the rushes. Saw badger tracks about the loch.

When looking at wild-fowl on the water, it is generally easy to distinguish what kind they are, even from a great distance. Scarcely any two species swim or float in the same manner, and at the same elevation above the surface of the water. Coots, as I have already said, and sea-gulls, float like bladders, with scarcely any of their body immersed: so that it is almost impossible to mistake one of the former at any distance at which a bird can be distinguished. The divers, such as the cormorant, the black-throated diver, and others of the same kind, swim very flat in the water, shewing scarcely any part except the top of their back, and their head and neck, which all these birds carry straight and erect, seldom or never bending and arching their throat like ducks or geese. In consequence of their swimming so low in the water it is difficult to kill any of these diving birds, unless you can get at them from a rock or height above them. Widgeon swim rather flat and low in the water. Mallards and teal keep more of their bodies above it, and are in consequence easier to kill while swimming. Pochards, scaup ducks, and others of that kind, swim higher still, but are very strong swimmers and difficult to catch when only winged, diving incessantly, and going out to the middle of the lake or pond, unlike the teal or mallard, who invariably, when winged or otherwise wounded, make for the land, if the sportsman keeps out of sight, and endeavour to hide themselves in the grass at the water's edge. Geese when winged dive with far greater quickness and facility than would be expected, and I have had very great trouble in catching a wild goose on a lake, after I had knocked her down, although I was rowing in a light and easily-

managed boat. Careful observation of the different manner of swimming of the several kinds of wild fowl when wounded is of the greatest use to the sportsman, saving him and his retriever many a weary and often useless wetting. Even with the best water-dog it is frequently of no avail to attempt to catch winged ducks of any kind. In cold weather, when the water is rough and the birds get a good start in an open lake, it is not only loss of time but is cruel to urge your dog to follow them too long. I have often succeeded in bagging winged ducks, widgeon, and teal, by walking round the edge of the lochs an hour or two after I had shot them, as the birds when left to themselves—the rest of the flock having gone away—either leave the water and hide in the grass, or else come close to the edge.

It occasionally happens in a small pool, that a winged wild-duck goes under and never appears again, having become entangled in the weeds at the bottom.

Wild-fowl seldom live long after they are winged, as they generally fall a prey to foxes and other vermin, all of which have a habit of hunting round lakes and swamps during the night, when the wounded birds quit the deep water to feed in the shallows or marshy places.

That beautiful bird the pintail is also a very quick diver and strong swimmer when wounded. It is a good rule in wild-fowl shooting always to endeavour to get shots at the birds, either when they are on dry land or when it is probable that they will fall upon it. In the first place, no bird is so easy to kill whilst swimming as whilst standing or walking, as then all the body is exposed; and in the second place so much time is lost, and so much disturbance caused, by pursuing the wounded birds, and even by getting the dead ones out of the water. Besides, it is almost a matter of certainty that when they are shot over the water some of the killed birds will be lost; and however good a water-dog your retriever may be, and however hardy, the less swimming and wetting he gets the better. Nothing is so ill-judged and useless as sending a dog into the water without good

reason for it ; doing so is always taking something, more or less, from his strength, and injuring his constitution. When standing waiting for ducks in cold weather the poor animal has no means of drying or warming himself, and lies shivering at your feet, laying up the foundation of rheumatism and other maladies.

A dog who has much water-work to do should be kept in good condition, and, if possible, even fat. It is a mistake to suppose that allowing him to come into the house and warm himself before the fire makes him less hardy ; on the contrary, I consider that getting warm and comfortable before the kitchen fire on coming home gives the retriever a better chance of keeping up his strength, health, and energy, when much exposed to cold and wet during the day—a far better chance, indeed, than if, on returning, he is put into a cold kennel, where, however well supplied with straw, hours must elapse before he is thoroughly warm and dry. Most rough dogs stand cold well enough as long as they are tolerably dry, but frequent wetting is certain to cause disease and rheumatism. I am sure too, with regard to water dogs, that a good covering of fat is a far more efficacious means of keeping them warm than the roughest coat of hair that dog ever wore. In wild animals, such as otters, seals, etc., which are much exposed to wet in cold countries, we always find that their chief defence against the cold consists in a thick coating of fat, and that their hair is short and close. In like manner dogs who are in good condition can better sustain the intense cold of the water than those whose only defence consists in a shaggy hide. Short-coated dogs are also the most active and powerful swimmers, and get dry sooner than those which are too rough-coated.

The imperviousness to wet of the plumage of wild fowl is evidently not caused by any power which the birds have of supplying grease or oil to their feathers. The feathers have a certain degree of oiliness no doubt, but from frequent observation I am convinced that it is the manner in which the feathers

are placed which is the cause of the water running off them as it does.

As long as a wild duck of any kind is alive, his skin remains perfectly dry, though in the water, and although from the situation in which he may be placed—being pursued, for instance—it is quite impossible for him to find time to “oil his plumage,” as some authors assert he does, “in order to keep out the wet ;” but the moment a duck or water-fowl is dead, the water penetrates through the feathers, wetting the animal completely. If one wing is broken, the feathers of that wing immediately become soaked with wet, the bird not having the power of keeping the feathers of the broken part in the proper position to resist the entry of the water. We all know that birds are able to elevate, depress, and in fact to move their feathers in any direction by a muscular contraction of the skin. When this power ceases the feathers hang loosely in every direction, and the wet enters to the skin.

The live otter’s skin never appears to be wet, however long the animal may remain in the water ; but, like the plumage of birds, soon becomes soaked through when the animal is dead. Whilst he is alive the water runs off his hair exactly as it does from the back of a bird during a shower. When we find any [live water] bird or animal with its feathers or hair wet and clinging together, it is a sure sign that the creature is either diseased or is suffering from some wound or accident.

The pintailed duck (*Dafla acuta*) in shape and plumage is one of the most beautiful of all wild-fowl. Its distinguishing marks are the two long tail-feathers, from which it derives its name, and the peculiar white line which divides the back of the neck from the front. The bill is rather long, of a bluish black. Legs and feet of a lead colour. The scapulars are particularly long and pointed, of a black colour, edged with white. The speculum or beauty spot on the wing is of a greenish brown, and not very bright. The pintail has a long slender neck, with a peculiarly snake-like manner of moving it. Altogether, the bird has

a more elegant, upright, and high-bred appearance than almost any other duck. Its flight is high and rapid, though it is not so shy and difficult of access as the widgeon, and will sometimes allow a person to approach within sixty or eighty yards before taking wing. Authors say that the pintail breeds only in the northern latitudes, but I have seen them flying about the loch of Spynie during both June and July, as well as all the autumn and winter months. At the same time, I never succeeded in finding their nests, though I have little doubt of their breeding in that loch. The female is of the same slender and elegant make as the male, but without the two long middle tail feathers. Its general colour is much the same as that of the common wild duck, though it is easily distinguished by its shape, and by the longer tail, which is slightly pointed. The feathers, from being all edged with a lighter colour than the centre, have a scale-like appearance.

The eider-duck (*Somateria mollissima*) is a rare visitant to this part of the coast. It is however sometimes seen in the Firth, but is too completely a marine bird ever to visit any fresh-water lakes. It breeds in some of the more northern rocky islands of Scotland, though even in these it is now rare. In Iceland, where the eider-duck breeds in considerable numbers, they are carefully protected for the sake of the down, with which they cover their eggs, and which the natives take in great quantities. The eider-duck is a large and clumsy-looking bird. The plumage of the drake is, however, bright and peculiar. The crown of the head is of a glossy black. The nape of the neck and upper part of the throat are of a pale pea-green. The lower part of the neck and breast are pale buff, or sometimes of a brownish yellow. The belly and lower parts are deep black. The bill and legs of a greenish brown. The female is considerably smaller than the male, and of a brown colour, inclining to a reddish shade. The eggs are large and of a greenish colour.

The scaup-duck (*Fuligula marila*) in general character and habits resembles the pochard very much, as also in its manner of

flight, of feeding, etc. It is oftener seen in pairs, and singly, perhaps, than the pochard, and is more frequently found on the sea. Like other visitors, it is much less numerous than formerly. The scaup-duck is in general good for the table, and when in good condition has no fishy flavour. It is entirely a winter visitant, though I once killed one in good plumage during the month of July near the river Findhorn. The head and upper part of neck are of a glossy black, the lower part of neck and breast of a plain dull black. The upper part of the body pencilled like the pochard. The bill is broad and of a lead colour, as are also the feet and legs. The irides are yellow. The young male is of a dusky brown, and has a white patch on each cheek.

The water-hen, or moor-hen (*Gallinula chloropus*), inhabits every loch, pool, and stream. Like the coot, they build a large nest of rushes and water plants. The eggs very much resemble those of the coot, excepting that they are proportionably smaller. When the pools and lochs are frozen, the water-hen takes to any stream or place where the water is open. Though apparently not well suited for so doing, this bird alights readily on trees. They are very familiar, and feed readily with poultry about a house. They eat almost anything, grain, plants, potatoes, etc. Though seldom used, the water-hen is not at all a bad bird for the table.

March 4 (1847).—The pochard which I brought home is now perfectly tame. The boys have him in a little yard, and he takes worms from their hand. When he takes a worm from the ground he generally washes it in the water before swallowing it; he has a water trough to himself, in which they have placed a quantity of weeds taken out of the burn.

March 6th. I have tried two or three days to get at the largest wild swan on Lochlee, but without success; my fruitless attempts I do not mark down—*horas non numero nisi serenas*. However, to-day—a fine sunny day—as I passed at some distance from the lake where the swans were feeding, they rose and alighted on the largest of the pieces of water; seeing this, and that they were not inclined to take to the sea immedi-

ately, I sent the boy who was with me round the lake where they were, while I made my preparations for receiving them at their feeding lake, supposing that they would return to it if allowed to rest for an hour or so, and then quietly moved ; even if they did not alight, I knew that I was pretty sure of their line of flight to the sea, and they seldom flew very high. I waded across part of the loch to an island, where I determined to await them, and set to work to make up a hiding-place of long heather, etc. This done, I loaded my gun with large shot and cartridges, and established myself behind my barricade. With my glass I saw the boy and retriever go round towards them ; the appearance of the swans floating quietly on the water was most picturesque, their white forms being clearly defined on the dark blue water, and their shadows almost as distinct as themselves. They all held their heads erect, watching the boy, who, as he had been instructed, walked to and fro opposite the birds and sufficiently near to put them up, but without appearing to be in pursuit of them. I hoped by this means to drive them over to the loch where I was concealed without frightening them so much as to make them take off to the sea. They seemed unwilling to rise, and little afraid of the boy, whom they appeared to look at with curiosity rather than alarm, and I struck a light in order to smoke the pipe of patience and resignation, for, fine as the day was for March, my situation in a damp island and wet through above my knees began to be uncomfortable.

The latakia was not half puffed away when I heard the well-known warning cry of the swans, and immediately looking round saw them just flapping along the water preparatory to their flight. Cocking my gun, and holding the pipe tighter in my teeth, I waited anxiously to see in what direction they would fly. At first they made straight eastward, as if off for the bay of Findhorn, but after a short flight in that direction they turned, and I saw them coming three and three together, as usual, straight towards where I was concealed. In a few minutes

they were exactly over my head, at a good height, but still within shot, flying with their long necks stretched straight out and their black feet tucked up, but plainly visible as they passed over me. I stood up and took a deliberate aim at the largest of them as he ascended higher into the air at my unexpected appearance. The first barrel seemed to have little effect on him, though I distinctly heard the shot rattle on his strong quills; the second, however, which was loaded with larger shot, was more effective: whilst his two companions continued crying to each other, he remained silent. However, he kept up with the rest, and they all went off towards the bay. In the meantime three smaller swans came within twenty yards of me, or less, trumpeting and calling loudly.

With the glass I watched the bird I had fired at, as I knew he was hard hit. He still, however, held his way with the rest, and they were gradually getting indistinct when I saw him suddenly rise straight up into the air, his snowy plumage shining as it caught the rays of the sun. I saw him a second time rise perpendicularly to a great height; he then suddenly turned backwards in the air and tumbled headlong to the ground perfectly dead. He was above half a mile or more from me, in the direction of the bay, and the whole intervening ground was covered with sandhills and bent, so that I could not see the exact spot where he fell, whether on the dry ground or in the sea. However, I marked the direction as well as I could, and set off after him.

Large as he was, I had a long and for some time a fruitless search amongst the broken sandhills. I scanned the bay with the glass in vain, and then came back towards the lochs. At last I hit upon him by finding a quantity of blood on the sand, and following the drops, which had fallen almost in a stream: in fact the track of blood, though falling from such a height, was as conspicuous as that of a wounded hare on snow. At length I came on the swan, who was lying stretched out on the sand, and a noble bird he was. I shouldered him as well

as his great length would enable me to do, and carried him back to where the boy was waiting for me. I found him no slight burden; he weighed above 27 lbs.; the breadth between his wings 8 feet, and his length 5 feet. Of all the swans I ever killed he was by far the largest, the usual weight being from 15 to 18 lbs.

The hooper, or common wild swan (*Cygnus ferus*), is the species most frequently seen on our lochs and coasts. The flocks are now far less numerous and frequent than they were even a few years ago. During a whole winter, only one or two small companies of wild swans are seen to alight and sojourn in any of our lochs. Their first arrival is usually about the middle of October. In 1852, however, I saw eight pure white swans arrive on the loch of Spynie on the 30th of September. There had been a few days of severe wind, and the higher mountains had already snow on their summits. These birds were gone by the next morning. Short as their time must have been in this land of fire-arms, I could plainly distinguish a large mark of blood on the side of one of them, staining its snow-white plumage. I never before saw the swans arrive so early; a man told me that he had seen above thirty pass over about the same time. Their coming so very early was, however, a very unusual occurrence. They appear to arrive in this neighbourhood in considerable flocks at the beginning of the season, and immediately afterwards to disperse into smaller companies, each departing to its own favourite wintering place. No birds offer so striking and beautiful a sight as a numerous flock of large swans on wing, while their musical cries sound more like the notes produced by some wild-toned musical instrument than the voice of a bird. While they remain with us, they frequent and feed in shallow pieces of water, like Lochlee, Loch Spynie, etc., where the water is of so small a depth that in many places they can reach the bottom with their long necks, and pluck up the water-grasses on which they feed. While employed in tearing up these plants, the swans

are generally surrounded by a number of smaller water-fowl, such as widgeon and teal, who snatch at and carry off the pieces detached by their more powerful companions. The rapidity of the flight of a swan is wonderful—one moment they are far from you, the next they have passed you like an arrow. This speed, however, is only attained when at a considerable height from the ground. When first rising from the water they are obliged to flap, or, as it seems, to run, along the surface, before they can get their heavy bodies into the air. Like many other water fowl, on first taking alarm at a sudden noise or appearance of an enemy, they collect hurriedly into a group before taking wing; and this is the moment to shoot at them, when their long necks are huddled together. It is nearly useless to fire at a swan passing over your head, unless you wait till he is well passed, so as to shoot at him from behind. The strength of their feathers, and the thickness and closeness of the down, effectually stop the heaviest shot fired at their breast. In the flocks of this kind of swan there are generally a few gray birds, the cygnets. These cygnets are smaller and weaker than the old birds. The latter, however, vary much in size and weight. This difference is indeed very perceptible at a distance.

March 13 (1853).—Fine; a great many teal, etc., on Loch Spynie, and two swans appeared—Bewick's swans. These birds (*Cygnus Bewickii*) usually come in smaller companies than the hooper. I never see above eight of the *Cygnus Bewickii* together, usually only four or five. They are easily distinguished, being shorter and more compact-looking birds. They also swim rather higher in the water, and are much tamer. Until they have been shot at and frightened, it is easy to approach them. Their plumage is peculiarly white, and the young apparently are not of the same blue gray as those of the *Cygnus ferus*. I cannot assert this as a fact, but I never saw one of the Bewick's swans that was not of a pure and snow-like whiteness. The wild swan on the water is by no means so picturesque a bird as the tame swan, as it seldom arches its

neck, or spreads out its wings to act as sails, as the latter bird does. On wing, however, the wild swan is unrivalled. Though I have known a tame swan shot in mistake for a wild one, the merest beginner in wild-fowl shooting ought to know the difference between the two birds. The bright yellow of the upper part of the bill is so conspicuously different on the wild swan from the black knob on the bill of its tame cousin, that whenever the bird is within shot they ought to be easily distinguished. The wild swan leaves us about the middle or latter end of April. But the arrivals and departures of water-fowl are by no means so regular as those of some other birds, being more dependent on sudden and perhaps unseasonable changes in the weather. For instance, I saw wild swans on 30th September in 1852, which is at least a fortnight before the usual time of their arrival.

March 18 (1847).—Walked to-day across the hills as far as the shore. In a kind of loch made by the sea I saw a great number of sheldrakes (*Tadorna Vulpanser*). As the tide left them they began feeding—walking quickly about, and poking their bills under the grass for any small shells or marine insects that they might find. This duck moves about on shore with a very different gait to that of the common mallard. Instead of the waddle of the mallard, the sheldrake walks about with a light active step and erect carriage, more resembling that of the wild goose than any other bird. Altogether, the sheldrake is a peculiarly handsome and showy bird, and I have no doubt could, with a little trouble, be made available in the poultry yard, as no bird is more easily domesticated, and though their flesh is rank and fishy when wild, I believe that when fed about a yard, on meal, etc., they would be as good eating as any other kind of duck. It leaves us during the winter, but comes early in the spring to the sandy parts of the coast, preparatory to breeding. Its food appears to consist almost wholly of small shell-fish, and more especially of cockles, which it swallows whole. It extracts these latter from the sand, by paddling or stamping with both

its feet. This brings the cockle quickly to the surface. I have often seen the tame birds of this species do the same in the poultry-yard when impatient for or waiting for their food. They breed in rabbit holes several feet under ground. At day-dawn I have frequently seen the drakes waiting on the hillocks near which their females are sitting. Foxes often destroy the old birds, by watching for them at the mouth of the hole where the nest is. As soon as hatched, the young take to the sea, and never come to land above high water-mark but in some sheltered places where the tide recedes to a distance. They appear to live wholly either on the sea or on the wet sands, where their food is plentiful. The young birds are so quick and active on the sands that it is almost impossible to catch them. When brought up under a hen, however, they thrive well. From their bright colours and constant activity they are very ornamental birds about a piece of water. The drakes, however, are apt to be savage to other young water-fowl. The sheldrake is heavier and taller than the common wild duck. The bill is bright red, with a black nail, and slightly turned upwards ; at the base is a raised knob. The head and neck are of a dark glossy green ; the upper part of the breast is white, the lower of a bright chestnut-brown ; the tail is white, slightly tipped with black ; the back and lower parts are white ; the upper parts of the wings black. The speculum or beauty spot is of a rich green, tinged with bronze. The chestnut mark on the breast extends in a band round the body. The legs are nearly crimson, or of a bright flesh-colour. The female is smaller than the male, and her whole plumage, though resembling, is less rich and bright. The egg is large, and of a pure white, without the green tinge of the mallard.

The pochard which I brought home from Spynie remains quite contented, and goes about with the other ducks. He will eat whatever they feed upon, but prefers worms to everything else, shewing great activity in diving for them when they are flung into the water. Even when brought into the house he

seems quite at home. Many kinds of wild fowl might, with a little care, be perfectly domesticated, and I have no doubt would breed freely. Care must, however, be taken to prevent their flying away at the migrating seasons, and also to keep them at home when they begin to make their nests, as at that time they seem inclined to wander off in search of concealed and undisturbed places. After two or three generations of any bird have been domesticated the young ones lose all their wild inclinations, tameness becoming hereditary with them, as skill and the power of benefiting by education become hereditary in dogs to a very striking degree.

The common mallard, though so excellent a bird when feeding in the stubble fields, is often rank and uneatable when driven by deep snows and frost to feed on seaweed, shell-fish, etc. Widgeon and brent geese also, and in fact all wild-fowl, are good or bad eating according to where they feed, in the same way that the dog of the Chinese, which is fattened for the table, must be very unlike in flavour to a foxhound fed on horse flesh.

The bernicle goose (*Bernicla leucopsis*) seldom pays us a visit, but I saw a few one day near the bar. I had one of my boys with me, who was anxious to get a shot at a wild swan which was swimming about one of the lochs, and when we came back from an unsuccessful pursuit of him the geese had left the place. This bird is numerous only on the west coast, and is rarely seen here. It is an elegant and beautifully marked bird, smaller than the bean goose. It is easily distinguished, even at a distance, owing to its peculiar pied appearance. The head is small and the bill short; the throat and side of the head are white; the upper part of the head, and the neck and breast, are all black. Between the corner of the bill and the eyes is a black streak. The lower part of the body is white, and the upper part variegated with gray, blue, white, and black. The tail is black; the legs are short, and of a dark colour.

March 19 (1854).—I expect a crossbill's nest, four eggs

and the two old birds, from Ross-shire by next steamer. I have a tame crossbill sitting by me now eating the seed out of fir cones. His tongue is very curious, it is like a long red worm. When the cone is open he takes the seed out with his tongue, squeezes the seed off from its "wing" and eats it. He is a fine healthy active bird, quite red. I see, though, that he prefers hempseed to the trouble of opening the cones.

March 20 (1847).—I see a few white-fronted geese feeding in the swamps near the lakes.

On the 22d the dabchicks come to their breeding places in the smaller lochs, where there are plenty of rushes, and the sheldrakes now come frequently inland.

The dabchick, or lesser grebe (*Podiceps minor*), is a lively and quiet little bird by no means uncommon on most of the rushy lochs of this district. It arrives in the spring, and remains to breed, generally going southwards for the winter. Its manner of arrival has frequently puzzled me, as its wings are but short and weak in proportion to the body. A pair of these birds appears suddenly in the spring in many a small solitary pool which has no stream connected with it, and to which their only access must be by a long and laborious flight. Their nest is large, and built in some tuft of rushes. Their eggs are six in number, oval in shape; when first laid, they are a pure white, but before hatching become of a dirty brown, and have the appearance of being rotten and destroyed. This comes from their being constantly damp, and from the habit of the old bird of covering all her eggs over with wet herbage when she leaves the nest for the purpose of feeding. The young when first hatched are black, and look more like large flies than birds swimming on the surface of the water. In summer the fore part of the head and neck are bright chestnut, and the crown of the head and back of the neck are black. In winter they lose the chestnut colour. Their rapidity in diving is wonderful; when alarmed and on the watch, they dive quick enough to avoid the charge even of a percussion gun, rising again with only the tip

of their bill above water, and even this generally concealed amongst some patch of weeds or grass. The little bird, however, is so harmless, and of such interesting habits, that it is to be hoped it seldom is injured by the sportsman. This and other grebes have peculiarly formed, partially webbed feet.

About the middle of March the black-backed gulls are very noisy in the bay.

The great black-backed gull (*Larus marinus*) measures from tip to tip of the wings frequently as much as six feet. The neck and all the lower parts and the tail are white. The back and upper parts are black. Its strong bill is yellow, with a shade of bright red on the lower mandible. The irides are yellow, and the centre of the eye of a red orange colour. The legs are pale flesh colour. It is certainly one of our handsomest gulls, and is a fine bold-looking bird, as it wheels overhead uttering a loud harsh cry. It feeds on dead fish, any kind of marine animal or shell-fish, and on carrion; its powerful bill enabling it to tear up almost any animal substance. The black-backed gull breeds generally on islands in inland lochs. At Loch-an-dorb they breed regularly; and on some lochs in the north of Scotland I have seen great numbers of these birds' nests. The egg is of an olive brown, blotched and spotted with dark brown. The young are three years in attaining the full plumage. They are at first of a spotted brown colour. The bird described in Bewick as the *wagel* is a young gull of this species.

As the old keeper saw some bean geese pass over the house, I took a long walk on the 12th to look for them in their usual feeding-places, but without success. The old man, a true "laudator temporis acti," complains that the whole country is spoilt by "drainings and improvements," which banish the wild fowl from their former haunts.

When the frogs begin to croak in the pools and ditches, the mallards are sure to be found in these places every evening and morning.

March 22 (1847).—Killed some fresh river sea-trout in the

morning. Fish have more sense or instinct than we give them credit for. I saw a trout to-day about six inches long that had been left in a small pool by a rise of the river, making its way over the *dry* stones across a ridge that separated the pool from the river, the distance being a full yard. When it saw us the trout immediately turned itself round, and mizzled back into the pool it had come from. This seems so very extraordinary a story that I should be almost afraid of telling it to any person.

March 23d.—*Nunc avis in ramo tecta laremque parat.* The wood-pigeons are building in the shrubberies close to the window.

How beautifully the different birds are constructed for their different modes of feeding! The tender nerves at the end of the bill of the woodcock, snipe, and curlew, enable them to find their food under ground as correctly as if it were within full view. The oyster-catcher can detach from the rock and break up mussels and other shell-fish. The oyster-catcher, by the bye, can have little to do with oysters except in name, for, strong as he is, he could scarcely manage to find his living if condemned to feed on oysters alone. The bill of the merganser and other birds of that kind is perfectly adapted, by means of its curved teeth, to hold their slippery prey, while the inward sloping plates in the wild-duck's bill are equally suited for retaining the small worms, etc., on which they feed. The carrion-feeding ravens and other birds of that class have a most perfect and powerful weapon in their strong and sharp bills. The crossbill, too, shears off the fir-cones and extracts the seeds with his clumsy-looking bill with a facility that no other shaped tool would afford him. In short, go through the list of all birds, and you will find that each one is perfectly adapted in form and powers for procuring its peculiar food.

Whilst talking of the food of birds I cannot help adverting to the absurd idea of woodcocks and snipes living "by suction," which one sees gravely affirmed as a fact; whereas, a snipe or woodcock is as great an eater as any bird I know. Any one who

has kept either of these birds in confinement well knows what difficulty he has had in supplying them with sufficient worms to satisfy their ravenous appetite. My friend Mr. Hancock tells me that he has succeeded in keeping many kinds of sand-pipers, and even the common snipe, alive and in good health by feeding them principally on boiled liver minced small, which seems to approximate more closely to the usual food of insectivorous and worm-eating birds than any other substance.

March 30 (1847).—Cold, sleet, and snow; the hills as much covered with snow as they have been all winter. Six swans came into the bay this evening, and near dusk flew westwards towards Lochlee. Some brent geese and great numbers of widgeons and mallard are here. The latter appear to have been driven down again from the high grounds. It is observable that the widgeon in the bay here are seldom in such good and forward plumage as those which I see in the fresh-water lochs, or on the coast of the more exposed parts of the Firth.

It is singular where all the gray geese (usually so numerous at this season) are this year.

It is amusing to see the arrival of the larger flocks about this time. A few small companies of pink-footed and white-fronted geese usually arrive early in the month, but about the 28th, and generally on some quiet evening, immense flights of the bean goose arrive in Findhorn Bay. They come in just about sunset, in four or five large flocks, and an infinite quantity of gabbling and chattering takes place for several hours; but by daybreak they seem to have determined on their respective beats, and separating into smaller flocks disperse over the land, and do not collect again in very numerous flocks until they are about to leave that part of the country at the end of April or the beginning of May. The wild geese decrease in number every year: the gray lag goose is a very rare visitor to the oat-fields here, although so many breed in Sutherland. The bean goose may sometimes be got at the end of March by wading up the drains, and when within reach the sportsman

should crow like a cock, or make some unknown noise, without showing, when the birds will all run up into a heap before rising.

The woodcocks are more numerous at this time of year in the larger woods than during any part of the winter: they pair early, and have probably before this time taken up their breeding quarters. Those which breed abroad do not leave this country till just before their time of laying. I am much inclined to think that most birds which migrate from us in the spring, pair some time before they take their departure.

There is scarcely a more beautiful bird than the magpie (*Pica caudata*). Its tail has the richest and most glossy shades of green, purple, bronze, etc., that can be imagined; and the clear white and black of the rest of the plumage render it very pleasing to the eye. Its nest is a most singular edifice, being roofed over with such a complicated mass of thorns and sticks interwoven with each other, that it is often impossible to get at the eggs without breaking away the top, or getting the hand well scratched. It is a lively inquisitive bird, immediately detecting the presence of an enemy, such as a cat, hawk, etc., when it raises such a clamour as alarms the whole neighbourhood. The magpie is very cunning in avoiding danger from gun or trap, and is destructive enough to eggs and young birds to make it an object of enmity to all sportsmen and gamekeepers. Perhaps the best way of killing magpies is to tether a cat in an open place within reach of a well-concealed ambush, from which they may be shot. One magpie on seeing the cat makes sufficient noise to collect all within hearing. Having once, however, ascertained the presence of danger, it becomes very cunning. The egg is pale blue, more or less spotted in different specimens; the usual number is six, but sometimes they have as many as eight. The magpie abounds in this district, building both in dense woods, and, where unmolested, in single trees, close to a farm or other house. Where lofty trees are scarce, it will build in a bush very near the ground.

Sir Alex. Cumming has just caught a trout 15 lbs. weight!

this is a thing to dream about. Several years ago I used to troll down the canal from the lochs opposite Laggan to Inverness on a windy day, fishing from the bank and killing a great many trout three or four pounds weight, bad fish but good fun. In the lochs too they used to take well. There is a loch called Loch Keeklish, joined to Loch Dunteliahach on the west, full of fine pike and trout. I once put in six trimmers and caught six pike of 12 lbs. each. I used to get also three-pounds trout in it easily. Loch-na-Clachan, at the east end of Dunteliahach, is also full of both. In Keeklish I have caught a pike 26 lbs.

It is a fallacy to suppose that pike are detrimental to the sport of the fly fisher, that is, in the Highland lakes, where there is depth and space enough for both kinds of fish to live and flourish; of course pike kill thousands and tens of thousands of small trout, but the fault of most Highland lakes is that there are too many trout in them, and the fly-fisher works for a month without killing a trout above a pound weight; pike keep down the overstock, there are still plenty and more than plenty of trout remaining in the water, and of a better size and quality than where they are not thinned. I have invariably found this the case, and that I could catch a greater weight of trout in a loch where there are pike than where the trout had no natural enemies to keep down their daily increasing numbers, besides which, though the pike is piscivorous, he is also most decidedly as omnivorous as a pig or an alderman; a great part of the food of the pike consists of frogs, leeches, weeds, etc.; young wild ducks, water-hens, and even water-rats do not come amiss to him. Like a shark, the pike when hungry swallows anything and everything that has the misfortune to come within reach of his murderous jaws. If the fact could be ascertained, I would back a *Salmo ferox* of 10 lbs. weight to kill more trout in a week than a pike of the same weight would in a month. I never killed a large trout without finding the remains of other trout within him, sometimes too of a size that must have cost him some trouble to swallow. In fine, I am strongly of opinion that pike

should be encouraged in all large Highland lakes where the trout are numerous and small. There is no doubt, too, that the large trout, with a due respect to the "*Lex talionis*," feed on the infant pike as freely as the pike feed on the young trout.

March 31 (1847).—In the bay to-day mallard, sheldrake, widgeon, cormorant, curlew, oyster-catcher, whimbrel, red-shank, ring-dottrel, and large flights of different sandpipers. I observed a peculiarity in the flight of the oyster-catchers and whimbrels. Large flocks of these birds were constantly alighting on a small island near where I was concealed. The birds invariably flew down wind to 60 or 80 yards to the leeward of the spot on which they intended to pitch, and then turning round flew back against the wind, and alighted with their heads to windward. Of the hundreds that were on the island not one pitched in any other manner.



CHAPTER THE FOURTH.

APRIL.

April 1 (1847).—Walked to Lochlee. The widgeon very much decreased in numbers. Great flocks of fieldfares and redwings singing on the trees.

April 2 (1853).—Rennie brought me a roundish white egg with a smooth shell which he found in a rabbit hole—length, $1\frac{3}{4}$ inch ; breadth, $1\frac{1}{2}$ inch—apparently the egg of the tawny owl.

April 3 (1847).—At this season the salmon and trout appear to lie in the dead water of a pool, or quite at the tail of the stream, so as to be out of the strength of the river, not having the same power of resisting the water as they have in the warmer weather. Cold as the water is, however, they take a fly that suits them, though certainly there are no living flies to be had by them.

4th.—The water-ouzels have entirely disappeared from the burn near the sea, having, I suppose, gone farther up the country to breed.

About the 4th or 6th of April the wheatear (*Saxicola ænanthe*) first makes its appearance here ; it is seen on the stone walls and along the sea-shore. Soon after this they are in great numbers, but I see the greatest number go still further northwards to breed. They build their nests in holes in stone walls, under stones, and similar places. About the first week in September they quit this country, frequently leaving a few stragglers, if the season is warm, for a few days after the departure of the main body. The wheatear is easily known by its white rump, which is very conspicuous as it flits with a jerking flight from stone to stone, and jerks its tail while standing. It has the habit of often singing while on wing and hover-

ing in the air. The male is ash coloured above, a white streak over the eye, a black patch on the cheek, upper part of the breast pale reddish yellow. The lower part white, bill and legs black. The female's colours are less brilliant and decided, and the ash colour of the back inclines more to brown. The wheatear a few years ago, and even now, though not to so great a degree, was very eagerly sought for and trapped by the shepherds on the south downs of Sussex for the London market. They are caught by means of horsehair snares placed in holes made on the smooth grass of the downs, by removing a turf of 14 inches long and 6 broad. This turf is then placed crossways on the hole, and the snares placed so as to catch the birds as they run into these holes for shelter. A heavy shower of rain, or any sudden alarm induces the wheatear to run into these holes for shelter. Simple as the contrivance seems, great numbers were annually caught on their passage from their breeding grounds in the north to the warmer south, where they can find a supply of insects, their only food, during the winter. The egg of the wheatear is pale blue.

The corn bunting (*Emberiza miliaria*) is one of the first birds which utters its spring note. Before the winter is well over, sitting on the topmost twig of a bush, it utters a loud shrill note. Frequently too it utters this cry while on the wing, hovering over the hedge, with its feet hanging down at full stretch. It is a very common bird, and to be seen near all farmyards, in every hedge, and on every stone wall. It is larger than a sparrow or greenfinch, and rather heavier than a lark, which bird it resembles much in general colour, though of a different shape. Its general colour is a pale olive brown above, and white below, but thickly spotted and mottled, both on breast and back, with a darker colour. The bill is short and strong, with a peculiarly shaped tooth, which assists the bird in shelling corn and seeds that it feeds on. The nest is difficult to find, being much concealed either in young corn or in the long grass which grows at the root of a hedge. The egg is of a dirty white

colour, mottled and streaked with purplish brown. In the winter the buntings collect in large flocks. When they fly from tree to tree they keep in a close compact body pitching again suddenly. They are excellent eating, superior indeed to the skylark, and are a fat heavy bird.

6th.—Walked to the wood at Black Stab with the boys, who found some rooks' eggs and peewits' eggs. The latter birds seem to commence several nests before they determine on laying their eggs in any one, as I frequently see three or four nests begun all near each other, and the peewits are far too quarrelsome for these to be nests of different birds. By the time their four eggs are laid, they generally collect a considerable quantity of straws, roots, or sticks, in their nests, appearing to increase it with every egg they lay.

Some gray geese were seen to-day. We caught a beautiful brent goose in a trap on a grassy island, which is generally covered by the sea at high water. Immense numbers of these geese float with every tide into the bays formed by the bar. As the tide recedes they land on the grass and feed in closely-packed flocks. On the land they are light active birds, walking quickly, and with a graceful carriage. On any alarm, before rising, they run together in a heap; thus affording a good chance to the shooter, who may be concealed near enough, of making his shot tell among their heads and necks. All geese and swans have this habit of crowding together when first alarmed.

The field-mice on the approach of cold and wet shut up the mouths of their holes. There are a great many of these little animals in some of the fields near the house, notwithstanding the quantity killed by the owls, who come down from the large woods every night and hunt in the cultivated grounds.

April 6 (1851).—We went to Dulsie for crossbills, but only saw one pair of old birds, which crossed the river. We had a most beautiful day. There is evidently a scarcity of fir cones in that particular wood, which I have no doubt has made

the birds move to some other district. The nests which we found were those of the crossbill without doubt, built exactly like those which we found last year. No other nest is like them.

We went after some bean-geese last week. There was a flock of twenty-five in a field feeding together, and eight other geese near, but *separate*, and feeding on clover instead of corn. We killed one of the latter, which turned out to be a very fine pink-footed goose, weighing $7\frac{1}{2}$ lbs. The habit of feeding apart from the bean-geese, and in a small company, I have always observed of the pink-footed goose. I found the same day a tree-sparrow lying dead under the wall of the old Castle of Duffus—a place standing alone in that flat country, a mile from the Loch of Spynie. No doubt they breed plentifully here. Blackbirds and hedge-sparrows have eggs near hatching in the garden. The wood-pigeons have built close to the windows.

April 6 (1853).—Two white hares killed near Dr. Maclean's house [close to Elgin] yesterday ; a very unusual occurrence to see these animals so far from their mountain home.

April 7 (1847).—I was out late with the keeper to-day, and we saw a very brilliant aurora borealis, or, as they term it here, "The Merry Dancers." He told me that often when the aurora was very bright, and the flashes rapidly waving through the sky, he had thought that he heard the merry dancers emit a faint rustling noise, like the "moving of dead leaves," but this was only when the night was quite calm, and there was no other sound to disturb the perfect stillness. The statement came from him quite uncalled for by any remark of mine, and was entirely the result of his own observation. I was pleased to hear him say this, as I had more than once imagined that the aurora, when peculiarly bright and rapid in its movements, DID actually make exactly the sound that he described ; but never having heard it asserted by any one else, I had always been rather shy of advancing such a statement.

The aurora is seldom seen, or at least seldom attentively

watched in this country, in situations where there is not some sound or other, such as voices, running water, or the rustling and moaning of trees, to break the perfect silence: but it has occasionally happened to me to be gazing at this beautiful illumination in places where no other sound could be heard, and then, and then only, have I fancied that the brightest flashes were accompanied by a light crackling or rustling noise, or, as my keeper expressed it very correctly, "the moving of dead leaves." Whether this is so or not, I leave to others more learned in the phenomena of the heavens to decide, and only mention the circumstance as the passing remark of an unscientific observer.

In the northern mountains of Sutherland, where the aurora is frequently very bright and beautiful, there is a fascinating, nay, an awful attraction in the sight, which has kept me for hours from my bed watching the waving and ever changing flashes dancing to and fro. I have watched this strange sight where the dead silence of the mountains was only broken by the fancied rustling of the "*dresses*" of the "merry dancers," or by the sudden scream or howl of some wild inhabitant of the rocks, until an undefinable feeling of superstitious awe has crept over my mind, which was not without difficulty shaken off.

The aurora, bright as it sometimes is in this country, must be far more wildly and vividly splendid in the more northern and Polar regions. Here it is almost invariably the forerunner of change of weather, or of rough winds and storm.

April 8 (1847).—It blew a hurricane to-day from the west-north-west, with cold showers. We anticipated this kind of weather from the brightness of the aurora last night. Large flocks of brent geese driven into the bay; the birds scarcely able to move from the ground in exposed places. I saw a sea-gull caught by the wind in the air and turned entirely over five or six times before it could recover its balance and get its head to windward.

April 7 (1852).—I see eels beginning to shew in the dead pools of the river. I see the remains of toads which have been

killed, and partly devoured ; in every instance only the hind legs have been eaten ; I suppose by the hooded crow. The toad catches insects with extraordinary rapidity. Some who live in a cask of water in the yard catch the flies when they settle near them. The toad on seeing a fly creeps up with great caution till within an inch or two, and then with a motion so rapid that the eye cannot follow it, the fly is caught and swallowed. Apparently the toad darts out his tongue ; but it is impossible to see exactly how the fly is caught. All one sees is a rapid opening and shutting of the toad's mouth, down which the fly (which was an inch or more from it) disappears as if by magic. The frogs also feed on the flies, but do not catch and swallow them with the same wonderful quickness.

April 10 (1852).—A water-ouzel (*Hydrota cinclus*) in the burn has two eggs. The nest is built in a broken bank. The bats fly about now round the buildings and garden. Geese have been seen about for some days, but do not seem to feed near this.

April 13 (1852).—One of my boys took the water-ouzel's nest, an immense building for the size of the bird, the whole being fully as large as a pail, made of moss outwardly, and lined with dried grass, etc.

This little bird of very singular habits changes its ground with the season. In spring and summer it frequents the high-land burns and solitary streams, where it breeds ; on the approach of winter it descends lower down the streams and rivers, where it feeds on trout spawn,* small water beetles, etc. It has a peculiar habit, while flying along a stream, of suddenly dropping into the water, where it either swims, or rather floats, on the surface, or dives down at once to the bottom, where it searches actively for its food—the beetles which form great part of its food being found on the stones and gravel at the bottom of

* Mr. Buckland in his volume on Fish Hatching says :—The water ouzel is guiltless of eating trout or salmon spawn. In several instances where the birds were shot immediately over the spawning beds there was no appearance of ova in the crop, but plenty of fragments of water beetles, etc.—ED.

the water. I never saw the water-ouzel feed on any insect which it caught out of the water or even on the surface; its whole food seems to be found at the bottom. Though the fact has often been doubted, it certainly runs and scratches up the stones while at the bottom in search of food. It has a sweet song (though not loud), which it utters frequently in the depth of winter, and on the coldest and severest days. It breeds earlier than most other birds. I have found eggs on the 8th of April. The nest is placed in a broken wall, under an overhanging bank, amongst the roots of a tree, or other similar situation, but always on the water's edge, and covered over the top, built of moss, leaves, etc. It is frequently of very great size, as the bird fixes on a broken bank sometimes, and has to build a very large foundation to make her nest steady. The eggs are a pure white. Sitting on a stone often in the midst of a rapid stream or waterfall, the white breast of the water-ouzel is conspicuous amongst all surrounding objects, and day after day it enlivens and adds an interest to the same part of a stream for many weeks, till the time comes for its partial migration. In the following spring the same stone or point of rock is again tenanted. The bird frequently runs into and under the water in the midst of a tolerably strong rapid, keeping out of sight for some moments, but emerging again at no great distance. I have before mentioned its habit of suddenly, in the midst of its flight, plunging down into the water, where, though it floats with tolerable ease, its motions, when on the surface, rather resemble those of a land bird accidentally falling into the water than those of a swimmer.

April 14 (1847).—We find no end of plovers' eggs.

The sand-martin, or bank-martin (*Cotyle riparia*), arrives the first of the swallow tribe. Early in April large flocks come pouring in apparently from the south-east. I generally see them first near Spynie, or other pieces of water, flying at no great distance above the tops of the rushes. They breed, as is well known, in sandy banks, old quarries, and such

places ; sometimes in large companies. They feed wholly on insects, principally on gnats and similar creatures. When they have young to bring up, they collect a mass or ball of insects in their throat or mouth before they return to the nest. The nest is formed of dried grass, and warmly lined with feathers. The eggs are white, with beautifully transparent shells. The nest is placed about two feet or eighteen inches from the mouth of the hole. It is peculiarly infested with fleas.

The house-martin (*Chelidon urbica*) usually arrives about the third week in April. At first they are in large flocks, but soon disperse. The nest is placed under eaves of houses and similar places. This martin also builds frequently along the sea-shore. Taking advantage of some suitable depression or hollow in the rocks, it attaches its nest, formed of mud, in the shape of a segment of a globe. The nest in these situations is very difficult to see, as it is neatly fitted into the angles of the rock. It is lined with feathers. The eggs are white, and very smooth. The house-martin can always be distinguished from the bank-martin by its superior clearness of colouring, and by being slightly larger. The upper parts of the house-martin are black or nearly so. Those of the bank-martin are a mouse brown. The toes of the latter are not covered with the same white down as those of the former. From the middle of September till the time of their departure, martins and swallows haunt the large rushy pieces of water, such as Spynie, not hovering much in one particular part, but seemingly hunting it from one end to the other in search of insects.

The chimney-swallow (*Hirundo rustica*) is perhaps the least numerous of the swallow tribe in this country, and at the same time the handsomest. I see them for the first time about the 20th of April. Warm springs bring them a few days earlier. Like the martins they appear first in the vicinity of lakes, where their food is more abundant than elsewhere. The name of "chimney swallow" denotes its habit of building

in chimneys. At the same time it builds frequently in other places similar to those chosen by the house-martin, such as under the eaves and projecting roofs of houses, also under open sheds, and not uncommonly in caves by the sea-shore. In the latter situations the nest is formed perfectly similar to that of the martin, and fitted into a hollow or crevice of the rock. When a hawk appears in their neighbourhood the swallow is always the first bird to give the alarm, and with loud cries chases the bird of prey to some distance. Though so swift of wing the swallow sometimes falls a prey to the merlin. A single hawk has little chance against the rapid wing of a swallow, but I have seen two merlins pursue a swallow till it was caught, the hawks helping each other, one keeping above and the other below their prey, till at last, after a long chase, by some unlucky turn, the swallow came in a favourable position for one of the merlins, and was immediately seized in the air and carried off. It must be, however, rare that the swallow can fall a victim to any bird or beast of prey. The nest is made of mud outwardly, and is lined with a great quantity of feathers. The eggs are of a delicate white, slightly spotted with ash colour.

The swift (*Cypselus apus*) is always associated in our minds with summer and fine weather. Always seen near towns or villages, it fixes usually on the steeples or highest buildings for its resting-place, and round these it wheels during the whole long summer day. In June and July the swift seems to be constantly on wing from two or three in the morning till the night sets in, which in this country is not till eleven o'clock. Indeed, as long as there is any light or twilight the swift continues its rapid but easy flight, in fine calm weather wheeling at a great height in the air; but in heavy damp weather it flies much nearer to the earth. Sometimes great numbers of swifts hunt for hours along the line of some piece of road, dashing one after the other within a foot or two of the head of the passer by, or it sweeps and skims along close to the surface of some stream

or pool by the hour. In fact, wherever and at whatever height the insects happen to be flying, there are the swifts clearing the air of thousands and millions of gnats and other flies. The swift appears never to alight for the purpose of resting. It builds under the eaves of houses and in crevices of the walls. The bird squeezes itself through a very small and flat aperture. The nest is carelessly made of a little dried grass or straw and a few feathers; the eggs are pure white, of a long oval shape. The materials for the nest are collected while the bird is on the wing, picked up off the ground, or caught while drifting in the air. The swift is easily distinguished by its rapid peculiar flight, by its larger size, its loud screams, and by its uniform black colour, excepting a slight shade of white under the chin. They arrive later than other swallows, and depart sooner.

April 17 (1847).—The arrival of the geese to-day was worth seeing. An immense body of 300 or 400 birds arrived first in one flock. As soon as they were above the sands every bird appeared to commence calling, making together a noise that first attracted our attention, though we were nearly a mile from the place. After flying to and fro above the bay they broke off into different companies and dispersed through the country, looking for feeding-places. We could see the flocks as they wheeled round and round different new corn-fields looking for places to alight. The boys caught a beautiful brent goose in the trap.

April 18 (1847).—Shot to-day a jack-snipe; it was the last I killed this year. Indeed I do not remember ever killing one after this time. I shot a greenshank on the same day. The latter bird breeds commonly in Sutherland. But I have never ascertained that the jack-snipe's nest was seen, or indeed that the bird is known to breed, in that county.

The common snipe (*Gallinago media*) is partially a bird of passage in this country, that is to say, there takes place a partial and irregular migration, depending much on the state of the weather. Great numbers breed about most of the swamps and marshy places. They are early in making their nests; I have

shot a young snipe flying and fully fledged on the 26th of May. The nest is placed in a tuft of grass or rushes, slightly made of grass, etc. The eggs vary in colour, and are of a greenish brown, spotted with dark rufous brown. During August, September, and October, snipes are extremely numerous in all the swamps, but are not then in such good condition as afterwards, when much fewer in number. About the end of October there appears to be a partial migration. Early in the spring they are again numerous, and round all the marshes they keep up a constant noise, beginning early in the evening and continuing it during most of the night. Sometimes the snipes take to the heather, and during the time stop about the small rills and wet places. In the dusk of the evening they may be heard coming down in great numbers to feed in the swamps.

April 18 (1851).—The golden eagle (*Aquila chrysaetos*) probably has hatched ere now. The eggs are worth a guinea a piece. It does not breed in this part of the county, nor have I ever seen it hunting in this neighbourhood, but I have had the good fortune to see it so employed in Sutherland on several occasions. Its visits to us are rare, but I have seen it at different times pass, at no great height, apparently on its way between Sutherland mountains and the Grampians. Generally the eagle hovers nearly motionless above her prey (supposing it to be a grouse or hare) at a very great height, suddenly closing her wings she drops as if about to fall at once to the ground, but stopping her course at the height of perhaps forty or fifty feet, she again hovers motionless for a short time, then she drops with great rapidity on the unfortunate animal, and, if it is small enough, lifts it at once from the ground and carries it off. At an animal flying or running she makes a quick dash, appears to surround it with her wings, and seldom fails to catch it. Dead sheep, however, and other carrion form their principal food in those districts where the mountain hares are not very numerous; and on a large animal, such as a sheep, the eagle gorges herself so greedily that she is unable to rise from the ground quickly

enough to escape an active man with a stick. Different instances of an eagle being killed in this manner have come under my notice. I have heard frequent stories of a child being carried away by an eagle, but could never trace these home to their source, nor do I think it likely that an eagle should find a child small enough to carry away sufficiently unprotected to induce her to swoop at it. Nor indeed does it seem probable that an eagle would carry off anything enveloped in the clothing of a baby. The eagle places her nest, which sometimes consists of an immense pile of sticks, on some nearly inaccessible shelf of rock, where it is also frequently overhung by some projecting ledge, which makes it doubly difficult to get at. Occasionally, however, an eagle in very lonely places builds her nest where it can be reached with little difficulty ; these cases are very rare in comparison to those where her eggs or young can only be taken by means of steady heads and hands, and strong ropes. The eggs are generally two in number, of a dirty white, more or less marked with pale red spots. The golden eagle is easily distinguished from the sea eagle by her rich brown plumage, with a reddish shade, and also by her legs being feathered down to her feet. Owing to the destruction which they cause amongst the lambs during the early part of the summer, eagles are becoming more scarce every year, though in some of the deer-forests I am glad to say they are not allowed to be trapped. Since their destruction in some districts the mountain hares have increased to such an extent as to become a great nuisance, and actually a source of greater loss to the sheep-farmer than the eagles were. The eagle has not the same tractable and docile disposition as the falcons, and it is impossible to train an eagle to hunt with any certainty ; she is as likely to attack the dogs of her master as the game which they have sprung, and would fly more readily to find a piece of carrion than to hunt a living animal. The temper, too, and disposition of this bird are changeable and treacherous.

April 18 (1847).—Riding by the heronry on the Findhorn

I saw the Altyre keeper searching in all the jackdaws' (*Corvus monedula*) nests that he could reach for the remains of the herons' eggs. These active little marauders live in great numbers in the rocks immediately opposite the herons, and keep up a constant warfare with them during the breeding season, stealing an immense number of their eggs, which they carry over to the holes and crevices of the opposite rocks and eat them, out of reach of the herons. The keeper took handfuls of the shells of the herons' eggs out of some of the jackdaws' holes: the injury to the heronry from this cause must be very great, as the plundering seems to be incessantly going on. The jackdaw is very common, frequenting every ruin or other lofty building; it inhabits also cliffs on the sea-shore, where it makes its nest in the holes and ledges of rocks. Sometimes also it builds in chimneys, where it is very troublesome, owing to the immense quantity of sticks which it collects. I observe that near the cathedral of Elgin the jackdaws completely strip the large trees of every twig which they can carry, cutting them off with their bills, and I have no doubt doing much injury to the trees by this constant cropping. They appear often to fix upon some place but little adapted for their nest, and to make it suit they fill it up with as many sticks as would nearly fill a wheel-barrow. The nests are lined with wool and other soft substances; the eggs pale blue, spotted with brown and ash colour. Jackdaws are nearly omnivorous; they are very partial to eggs, and carry off a hen's egg with great ease, generally returning to the same place till they have taken every egg from the nest. Among cherries, too, they are very destructive, but, like rooks, they feed principally on caterpillars, grubs, etc. The jackdaw is easily tamed, and becomes very sociable and attached to its master.

I see that the peregrine falcon still breeds near the heronry, on the Findhorn: a pair only remain in the rock, as every season they drive away their young ones to find a resting-place elsewhere. The barn owl also breeds in the same rocks: not having

towers or ruins to breed in, they adapt themselves to their situation and take to the rocks.

The male of all hawks, I believe, feeds his mate while she is sitting on her eggs. Whilst I was fishing in the Findhorn, at a place where a great many kestrels breed, one of these birds came flying up the course of the river with a small bird in his claws. When he came opposite the rock where the nest was, he rose in the air and began to call loudly and shrilly for his mate, who soon came out from the rocks, and taking the bird in her talons, flew back with it; the male bird, after uttering a few cries expressive of pleasure, flew off to renew his hunting.

The time at which roe lose the velvet from their horns seems to depend on the lateness or earliness of the season. This year (1848) is backward, and as late as the 15th of this month I see that the horns of the bucks are still covered with the velvet. In early seasons their horns are quite clean by the 4th or 5th of the month. When the larch and other trees become green, the roe wander very much, taking to the smaller woods and grassy plantations in search of some favourite foliage or herbage. A fine buck came to an untimely end at Darnaway. Mr. Stuart, on his way to fish, was going along a narrow footpath on the top of the rocks which overhang the river, when his dogs, running into the cover, started a buck, who, taking a sudden spring into the footpath, found himself unexpectedly within a few inches of Mr. Stuart, in fact almost touching him. Without pausing for an instant, the frightened animal, with another spring, went right over the high rocks into the deep black pools of the river below. Mr. Stuart got down to the water and managed to pull him out, but the poor roebuck was quite dead, killed by the shock, although his fall must have been into the water.

When a crow leaves her nest on being disturbed, her quiet, sneaking manner of threading her way through the trees tells that she has young or eggs in the thicket, as plainly as if she

uttered cries of alarm. These birds are early breeders: I found a hooded crow's nest, with eggs nearly hatched, on the 16th April.

April 19 (1848).—The common wild duck often builds her nest in a situation from which one would suppose it would be very difficult for the young, when first hatched, to make their way to the water. My retriever put up a wild duck on the 16th in some very high and close heather at some distance from any water. I found that she had her nest in the very centre of the heather, and in the densest part of it. The nest was very beautifully formed; it was perfectly round, and looked like a mass of the finest down, with just sufficient coating of small sticks, etc., outside to keep the down together. There were thirteen eggs in it, which we took home and put under a bantam hen: they were hatched in a few days, and I allowed them to go at liberty with their foster mother in the kitchen garden, where they soon became perfectly tame. When the gardener digs any part of the ground, the little fellows immediately flock about his spade, so that it is difficult for him to avoid hurting them, as they tumble about on the newly turned-up earth, darting at the worms which come into view; whenever they see him take his spade they run after him as if they thought that his only object in digging up the ground was to find them food. One tiny fellow, who is weaker than the rest, and who consequently gets pushed out of the way by his stronger brethren, waits quietly to be lifted up on the flat of the spade, where the gardener allows him to stop, out of the reach of the others, while the little glutton swallows a worm nearly as big as himself. The moment the spade is laid flat on the ground he knows that his turn has come, and running on it looks out for the expected worm, and is quite fearless although raised on the spade several feet from the ground.

There are few wild birds or other animals which could not be tamed and made useful to us, if, instead of constantly persecuting them, we treated them with hospitality and allowed them

to live in peace and plenty. All wild fowl are susceptible of domestication, and there are very few kinds which would not breed in a tame state.

Most wild-fowl require very little extent of water, so long as they have grass fields to walk about and to feed in. No more water is necessary than is sufficient for them to wash and take an occasional swim in.

Our brent goose seems to eat scarcely anything but grass, and any snails and worms it may find in the field. He is a far more graceful bird on land than the pochard, for quick and active as the latter is in the water, his great flat feet, placed far behind, are of little service to him in walking.

April 19 (1852).—I see in the rapid gravelly streams of the burn a great many lampreys, about five inches in length, collected in groups of six or eight, and apparently very busily employed in carrying about small stones about the size of a sweet pea. The river and burn are smaller than I ever saw them, owing to the long continued want of rain.

April 19 (1853).—Every bird is late this year. This season I do not think the wild ducks have eggs yet, though I found them nearly hatching three days earlier in 1848.

April, if the weather is fine and genial enough to bring out many flies, is about the best month for trout fishing on the Findhorn. Large river-trout, which are seldom seen at any other time of the year, make their appearance in this month and rise freely; the sea-trout fishing, lower down near the sea, is equally good, the fish being numerous and eager to take the fly.

April 20 (1847).—Fished at Darnaway, but only one salmon rose all day. The kestrel hawks are very numerous. I saw one fly into a tree calling loudly and carrying something, a small bird or mouse. Presently another hawk of the same kind came, and the first bird immediately gave its prey up to the last comer, who carried it off. The bird which brought the mouse carried in its beak, but the one that received it carried it off in its claws.

The kingfisher, though common on many or most streams in

the south, visits this district very rarely. I have, however, occasionally seen a stray one; one remained some days near the mouth of the Findhorn. Its usual position was on the top of a post, close to a ditch which ran into the river. The place abounded with sticklebacks, and the kingfisher frequently hovered over the water like a hawk, till it saw a fish in a favourable position. Then, dropping into the water like a stone, it seldom failed to bring up its prey in its bill. Its flight is very rapid, and generally in a direct line. When perched it has an awkward appearance, from sitting very much upright, rather leaning backwards. The eggs are white. Its brilliant plumage is well known, and distinguishes it from any other British bird.*

April 20 (1849).—When the Findhorn is small, I have found the 2 lb. sea-trout take a *small* fly, lark wing, small black hackle, a little silver and black body, a very small light made fly, taking well in the lower pools *not* in the current; also a small fly made of guinea fowl wholly. The willow wren arrives generally about this time.

April 22 (1851).—Drove down to the sea-coast to-day, and after certain trouble, manœuvring, and stalking, I shot a pair of peregrines—male and female. I shot the female passing over me dead as a stone, in the clouds. The male was sitting afterwards half-way up the rocks, and I stalked him from the top. I had determined to succeed, but I should not have shot the birds for any other reason than to oblige Mr. Hancock, and see them live again as stuffed by him.†

* For a description of the kingfisher's habits and nest, see "Life in Normandy," edited by J. F. Campbell. Edinburgh, 1863.

† Respecting these birds, he writes to Mr. Hancock:—"May 1.—I am really glad that the birds reached you in good condition. Is not the male a beauty. The female is rather dark coloured, but a fine bird. I cannot suggest an attitude or grouping which you could not improve on. They will be interesting to you, knowing where they were killed. I have a fancy that a peregrine should not be the apex of the group—*i. e.*, that the rock should come up nearly as high as the bird's head. When I think of the peregrines wild, I remember them oftener as sitting on a projection rather

Wheatears, swallows, and martins are come. The woods are full of siskins—very few crossbills ; all the small birds have eggs, and young ones in the garden.

In this country April is the best month for the bean-geese, yet many weary and often fruitless miles I have walked in pursuit of them. There is something in the wildness and wariness of this fine bird that makes it a peculiarly attractive object of pursuit ; but wild-geese shooting is

“ *omnium rerum incertissima.* ”

When I have concealed myself in one of my hiding-places in a newly-sown field of oats or peas, the geese, after keeping me perhaps a long time waiting, may arrive at last ; and alighting on the field, may commence feeding without any suspicion of danger till they come nearly within shot. But although concealed from the geese, I may be visible in a different direction, when a couple of villainous large black-backed gulls—as happened to-day—come by, and seeing me lying in wait in a suspicious manner, immediately commence screaming and wheeling over my head. The geese, who are all dispersed in the field, no sooner hear the gulls than they run rapidly together away from me, for they know by the direction in which the gulls are looking, where the danger is ; they then rise and betake themselves straight to the sea, leaving me without the chance of a shot, after all the trouble I have had in preparing an ambuscade.

April 23 (1847).—I went to look for wild geese, but though we saw a great number, and several large flocks evidently newly arrived searching over the country for good feeding-places, we could not get a shot. Once we nearly succeeded in approaching unseen some white-fronted geese, one of which I was very

than on the summit of a cliff. I have often seen a peregrine sitting on a lump of stone in a plain or near a rock, but when on a cliff never on the summit. I never saw a peregrine make any nest—only the slightest hollow scraped in the ground. I have an anecdote to tell you. I gave a female peregrine some years ago to a friend. This year she laid twelve eggs, and then died.”

anxious to procure for a friend. I saw the birds go to a pool where I knew I could get within shot of them without the least trouble. So making a considerable circuit, I arrived at a part of the ground from which my approaching the geese was perfectly easy. But just then some peewits saw me as I was advancing in a crouching attitude up to the birds. Had I been walking upright, these peewits would not have taken any notice of me; but as they saw me stooping to conceal myself, they attacked me with screams and cries of alarm sufficient to warn all the country. The geese of course took wing, and left me to return as I came.

The peewit or lapwing (*Vanellus cristatus*) is very numerous during the spring and summer; some few remain during the whole winter, but the greatest number leave us about the last week of November. On the 25th of that month I have seen immense flocks of peewits in the fields, where they appear to collect previous to departing. Early in February they return. They breed both in the dry fields and about the swamps, in both places scratching a small hole in the ground just large enough to contain their four eggs, which lie always with their smaller ends meeting in the centre of the nest. They collect a slight nest of bits of straw, etc., and appear to be adding to it as long as they sit. The exact time of laying is irregular, varying from the 3d or 4th of April till the end; but those birds whose nests are destroyed seem to have later nests for several weeks. When first hatched the young ones leave the nest and betake themselves to the shallow parts of swamps, where the old ones attend them with great care. During autumn and winter, and when collected in flocks, the peewits are very shy and watchful, seldom allowing themselves to be shot. As the dusk approaches they leave the lochs and swamps and fly with great rapidity to their feeding-places, which are generally in the grass fields. They do not then fly in flocks, but singly, or in scattered companies. Before daybreak they are again collected together on some favourite ridge or mudbank. There is not much difference

of plumage between the male and female. The former is rather brighter and more distinctly marked, and has a longer crest. The eggs vary much in colour and marking. The general colour is a dark olive green and much spotted with black; they are much larger at one end than at the other. In England they are much sought after as a table delicacy. Those who live by taking their eggs during the season are very skilful in finding them, and by taking only one egg at a time induce the bird to lay daily for two or three weeks.* The old bird, when killed during winter, is fat and excellent eating.

To stalk a flock of wild geese when feeding is as difficult as to stalk a stag, if not more so. From the nature of the ground which they feed on, and their unwearied vigilance, unless you have concealed yourself beforehand within reach of their feeding-place, it is nearly impossible to approach them. Even if some half-dry ditch or drain passes through the field, and is of sufficient depth to hide the sportsman, supposing he has strength enough of back and of resolution to walk in a stooping position up to his knees in cold water for some hundreds of yards, still the birds are most unwilling to approach any such line of ditch, or indeed any other place which can possibly conceal an enemy.

One of my boys, however, succeeded in getting at a flock of white-fronted geese in a place where a man could never have done so. He was out for a walk with a gentleman who was staying with me, to whom he was acting as cicerone or guide to the lochs, as I was unable for some reason to go out with him myself. The little boy took the telescope, which their attendant carried, and having looked along the shores of the lakes and through all the likely parts of the ground, which he knew as well as I did, from having frequently ridden that way to join me, he shut up the glass with the exclamation, characteristic of a deerstalker—"There they are!" My friend's question of

* My keepers bring in as many as fifteen or sixteen dozen at one time.
—A. P. G. C.

course was—"Who are there?" And on being told it was a flock of geese, he at once understood why he had been led on from point to point under different excuses; for he had good-naturedly followed passively wherever he was told to go. Having been shewn the geese, he sat down with the glass and allowed the child to attempt the task of stalking them, but without having the slightest expectation of his success.

He watched the boy for some time till he became invisible, having apparently sunk into the ground amongst the rushes and long grass. His attention was next attracted by seeing the geese suddenly rise, and almost immediately perceiving that one fell to the ground. The next instant he heard the double report of the boy's gun. Another goose left the flock and fell at some distance, but it was unnoticed by him and the servant, as their attention was taken up by the young sportsman, who went dashing through water and swamp to seize the first bird that fell. It was nearly as big as himself, and he brought it up to them in triumph, a successful right and left at wild geese being rather an era in the sporting adventures of a boy ten years old. The well-earned game was then slung across his pony in company with sundry rabbits, etc., and was brought home with no small exultation.*

The white-fronted goose (*Anser erythropus*) is a very handsome and compactly made bird. Though perhaps not quite so long a bird as the bean-goose, the weight would be about equal. In mature plumage the breast is barred with black in a very conspicuous manner, and the white patch above the bill is strongly marked. When young the plumage is altogether more dingy and less decided, and the white part is scarcely visible. The bill is of a flesh colour, inclined to orange, with a white nail; the feet of much the same colour as the bill. It arrives in this country from its breeding quarters in the arctic and northern regions about the middle of October, in small companies of from six to twelve generally, and if left tolerably undisturbed frequents

* Harry St. John was the hero of this adventure.

regularly the same swamp or piece of marsh till the end of April, feeding on aquatic plants, and in the spring frequently grazing on the young clover or green wheat more in the manner of the gray-lag than the bean-goose, the latter confining itself as much as possible to grain. This bird is more easy to approach than any other wild goose, and I have often found it feeding in small hollows and spots easily got at, where the bean-goose would never trust itself. Their cry is very loud and peculiar, sometimes resembling wonderfully the loud laugh of a human being. Hence its name of "laughing goose." Although feeding so much in marshy places, the flesh is remarkably good; indeed, when in good condition, this goose, the gray-lag, and the bean-goose, are all excellent, being totally free from any fishy or rank taste. The white-fronted goose resembles the gray-lag and our tame birds far more than the bean-goose both in shape and habits, and would be easily domesticated. All birds of passage, however, when tamed, become restless and anxious to migrate both in spring and autumn. After two or three generations this instinct would probably be lost.

April 25 (1847-1848).—For the last two years I have first seen the martins on the 25th of April, and the common chimney swallow on the 27th. The terns also come at the same time. Indeed in both years I have seen them on the same day, *i.e.*, the 27th.

No more beautiful birds can be found than the terns; their easy and graceful flight, and their pure satin-like plumage, render them universal favourites. The common tern (*Sterna hirundo*) breeds on most of the retired parts of the coast. The nest is simply a depression in the ground or shingle. The eggs are three in number, of a stone colour, or light yellowish brown, spotted with brown and ash colour. These birds arrive in the end of April or beginning of May, and commence breeding towards the end of the latter month. When the day is bright and the sun hot, the terns do not appear to sit on their eggs, but, hovering constantly over them, leave them to the heat of the sun re-

flected from and increased by the warm shingle. But in rainy or even cloudy weather they sit upon their eggs like other birds. When the young are hatched the old birds lead a busy life fishing for the sand eels which frequent the coast at that season. They hover in the air in the same manner as the solan goose, and drop suddenly into the water with a great splash, appearing almost invariably to be successful, and rising to the surface with their quarry in their bill. The fish is always held just behind the head, where the mark of the bird's bill is plainly to be seen. The rapidity and precision with which the tern pounces on its prey can only be appreciated by those who know the quickness and shyness of the sand eel. The fishing ground being often several miles from the nest, and the tern only taking one fish at a time to its young, the labour of feeding them must be very great. I have often seen the old birds beating to windward against a strong head wind, carrying their small prey with persevering patience towards the breeding-place, the whole day occupied in passing to and fro in this manner. The length of the common tern is about fourteen inches. The bill is deep red tipped with black. The length of the bill is about two inches and a half. The crown of the head and nape of the neck is black. The upper parts are pale blue ash colour. The lower parts and tail are of a pure shining white. The legs and feet are red.

The arctic tern (*Sterna macroura*) is very similar to the common tern. It is, however, slightly larger, and the bill is a little shorter, and is *not* tipped with black, being crimson throughout. The tail is longer in proportion, extending beyond the wings. It breeds generally inland by the margin of some loch or river, often some miles from the sea, to which, however, it is obliged to resort for the sand eels with which it feeds its young, and which it carries patiently one by one to the nesting-place. Amongst the flocks of terns I have sometimes clearly seen the "roseate tern" (*Sterna paradisea*), distinguished by the rose-coloured tint of its breast as it hovered over my head at no great height from the ground. In all probability specimens of

most British terns may be met with on this coast at different times, but I have only marked down and described those birds which I have actually seen myself, or ascertained to have been killed in this district.

The lesser tern (*Sterna minuta*) is a beautiful little bird ; it is not above seven or eight inches in length. The tail is shorter in proportion than that of the common tern. The upper parts are blue ash colour. The crown of the head and back of the neck black, the forehead is white. The lower parts of a very pure white, glossy-like satin. The bill and feet are more of an orange than of a red colour. It breeds in the same places and manner as the common tern, but is much less numerous. Its cry is easily distinguished amongst the flocks of terns, consisting of one sharp note frequently repeated. It is a tame little bird, and hovers fearlessly over the head of any intruder. The eggs are like those of the common tern, but smaller.

The widgeons begin to decrease in numbers. I do not understand the moulting of these birds : for up to the time when they leave us, many of the male birds have not attained their full plumage. Those which frequent the salt water are more backward in this respect than such as feed in the fresh waters ; nor are the former ever in such good condition or so well flavoured as the latter.

There are very large flocks of the oyster-catcher, the curlew, and the knot, on the sand-banks. Whenever these birds want to alight on any spot, if the wind is at all high they invariably pitch with their heads straight to windward ; if they come down the wind to their resting-place, they first fly past it, and then turning back against the wind, alight with their heads in that direction.

Amongst the curious instincts which birds display in providing themselves with food, one most resembling reason is that which teaches the common crow, on finding on the shore a shell containing fish, to fly with it to a height in the air, and then to let it drop in order to break the shell sufficiently to get at the

fish enclosed in it. When the shell does not break the first time that the crow drops it, she darts down, picks it up, and ascends still higher, till she perceives that the height is sufficient for her purpose. Sometimes another crow darts in to carry off the booty; upon which a battle ensues in the air. Cunning as the crow is, she seldom finds any prize without letting all the neighbourhood know of it by her cries and gestures. With perfect truth the ancient poet said—

“Tacitus pasci si posset corvus, haberet
Plus dapia, et rixæ multo minus invidiæque.”

The crows collect great numbers of sea-shells on particular favourite hillocks, which are often at some distance from the sea. I have frequently observed in this country great collections of this kind, and from the state of the shells it would appear that they bring them to the same place for many successive years.

The thrush (*Turdus musicus*) has a similar habit. When it finds a snail which it cannot extract from the shell, it carries it to some favourite stone which happens to have a convenient chink in it, fixes the shell so that it cannot slip, and then soon breaks it up, using its strong bill like a pickaxe. The blows of the bird when opening a shell in this manner may be heard to some distance. In my garden there are certain stones round which there are always a number of snail shells left broken by the thrushes, and I have frequently seen stones used in the same manner in the woods. Though not migratory, in the common sense of the word, the thrushes change their quarters at the approach of winter, leaving the large fir-woods and higher grounds for the gardens and cultivated fields.

This bird is common everywhere. It builds its nest in every wood, garden, and hedge. The nest is large and strongly built; composed outwardly of coarse grass, moss, etc., and lined inwardly with a coat of mud or clay, plastered smoothly on, and made into a perfect half globe. The egg is a beautiful light blue, with a few black spots at the larger end. The thrush

begins to sing early in January in mild weather, but at that period of the year neither sings frequently nor regularly. As the spring advances, it sings most indefatigably, usually commencing at the same hour of the day ; and, seated on the same branch, day after day it pours forth its rich and loud song. The notes of the thrush are very varied. If carefully listened to, the songs of no two thrushes are quite alike, and in some the difference is very striking indeed—in so much so, that the songs of different birds in the same garden can be as well known from each other as the voices of different people. They certainly destroy much fruit, commencing with the earliest strawberries, eating all fruit in succession till they end with the autumn apples and pears. They are then driven to holly berries, those of the mountain ash, elder, etc. They are also very fond of mulberries. At the same time the thrush is of great service in clearing the garden of grubs, slugs, and snails. They search with great assiduity for these during the winter under dead leaves close to the wall, the box edging, etc.

Every year the blackbird (*Turdus merula*) becomes more numerous in consequence of the destruction of hawks and other enemies. There seems to me no bird which so often falls a prey to the sparrow-hawk. Gliding through the thicket or shrubberies, the hawk's eye is attracted by the conspicuous colour of the blackbird. It is a more familiar bird than the thrush, and does not build its nest so often in the larger woods, preferring the neighbourhood of houses, and even frequenting gardens in the midst of towns. The blackbird's song has not the same variety as that of the thrush, but has even greater clearness and "precision" in the notes it can execute. Like the thrush it feeds on berries, fruit, and insects of all sorts indiscriminately, and does equal service and dis-service to the gardener. The female sits very closely, and is very tame during incubation. In the winter the males lose the bright yellow on the bill, which becomes a plain black. The nest is similar outwardly to that of the thrush, but is lined with coarse grass,

etc., instead of mud. The blackbird when building in the garden picks up all sorts of substances to form the outside of her nest with—large pieces of rag, string, even pieces of newspaper, are all interwoven. They build either in low bushes or in the wall fruit trees. One built and brought up her young under a net placed on a cherry tree trained on the wall of my garden, always scrambling up and down from the bottom of the net, so little protection was it from their inroads. The blackbird is not uncommonly seen variegated with white, and I have seen some entirely white, or rather cream-coloured. The egg is pale blue, thickly spotted all over with brownish spots. They vary much, however, some being but slightly spotted and occasionally entirely blue, though not of the bright shade which distinguishes the egg of the thrush or hedge-sparrow.

The ring-ouzel (*Turdus torquatus*) so much resembles the blackbird in shape and figure that at a little distance they may be easily mistaken for each other. On closer observation, however, the ring-ouzel is at once distinguished, not only by the white crescent on the breast, but also by the whole plumage being much less black, almost all the feathers having a margin of a lighter colour. Its cry and song are both unlike those of any other of the thrush tribe, both having a kind of wildness in them in keeping with the scenery in which this bird is usually found. The general locality of the ring-ouzel is amongst the scattered birch and juniper, which are thickly spread amongst the rocky parts of the hill-side, and it inhabits the wildest and most solitary glens, where its song, coming unexpectedly on the wanderer, sounds doubly sweet and striking. Indeed, the song is in itself, without the accompaniment of wild and rugged scenery, very sweet and melodious. Since the destruction of hawks and "vermin" the ring-ouzel has increased very greatly, and its devastations amongst the few cherries that grow in the garden of the Highland manse or farm-house are very severe. It is an active restless bird, constantly in motion, passing with a jerking flight from rock to rock or bush to bush, uttering

at the same time a sharp harsh cry. They change their ground at the approach of winter, coming down from their summer habitations, and moving frequently in scattered flocks. Their food consists of insects, and such berries as grow on the mountain and hill-sides. The nest is placed in a low bush, or under a projecting piece of rock, in a broken wall, in the ivy which sometimes grows on the rocky cliffs. The eggs are light dull blue, spotted with gray brown.

The breeding of the siskin (*Fringilla spinus*) in this country has been much questioned by naturalists. However, I have frequently found the nest in Moray, more especially in those woods where there are spruce fir trees of a considerable size. Towards the summit, or about two-thirds up the tree, the nest is placed on a horizontal branch, and owing to the thickness of the foliage and the smallness of the nest it may well escape notice. In some of the woods near Elgin the siskin breeds regularly, and in some numbers. On account of the extreme cunning or caution of the bird in going to and from its nest, it is difficult to make out its exact position. I know no bird more difficult to watch than this. The best time to find the nest is when the siskins are building it, as they are more conspicuous and less on their guard when carrying a feather or tuft of wool. It sometimes, though not so frequently, builds in the common Scotch fir. Its nest is then also placed in a horizontal branch, and at a considerable height from the ground. The siskin breeds early—a nest with five eggs was taken near Inverness on 10th April.

April 26.—In the woods near Lochnabo we found two siskins' nests with young ones well fledged. Though so wary when at liberty and taking care of its nest, no bird is more familiar and tame when in confinement. A person in Elgin shewed me a nest with four young ones, which he had taken the day before from a Scotch fir tree. In the same cage he had the two old birds belonging to the nest; these he had taken with bird-lime. The female at once commenced feeding her young while in the cage, and the male in a day or two followed her example; so

that between them they reared their family with as much care, and with apparently as much pleasure, as if they had still been in the woods. An old siskin, in a few days after being caught will eat out of the hand of its master, and very soon seems to form a kind of acquaintance and attachment to those who feed it. The nest is smaller and neater than that of a greenfinch. The eggs are white, tinged with blue and spotted with brown, very much resembling those of the canary. In the winter the siskins come in large flocks, feeding on the seeds of the alder and birch, and also on the thistle seeds, and those of many other weeds. The male has the crown of the head and throat black; the rest of the plumage is prettily marked with greenish gray and yellow; the rump is yellow, and the tail feathers have a wide yellow band near the base, except the centre feathers, which are black; it is much forked. The female, though far less bright, is prettily marked with longitudinal spots on each feather of the upper parts and of the breast. It is a cheerful, restless little bird. Its song, though not varied or rich, is pleasing. In the spring it frequently utters a long harsh cry like the noise of a file.

April 29 (1847).—In the firwood beyond Kinloss we found the nest of the long-eared owl (*Otus vulgaris*), with one young bird above half grown, with the brightest yellow eyes. There was a rotten egg in the nest. The owl had apparently taken possession of an old crow's nest on the top of a tall Scotch fir-tree in an open place of the wood. This owl is one of the most common that we have, and inhabits most of the fir woods in this part of the country. The upper parts are beautifully marked with different shades of brown and white. The lower parts have a yellow tinge with longitudinal streaks. It is easily distinguished from any other of our owls by its long ears or horns which are of a dark or black colour edged with white, and by its peculiarly staring eyes of a bright orange colour. The legs and feet are feathered down to the talons, which are remarkably hard and sharp. The egg is pure white, and more round than

oval. The usual food of this, and indeed of most of our owls, consists of mice, but they also prey upon young partridges and other game which they happen to find late in the summer evening. I have also known this owl commit great havoc in the pigeon-house, killing both old and young pigeons in the moonlight nights. I have seen it dash like a sparrow-hawk into a hedge or bush to catch the small birds roosting there. Indeed there is every reason to suppose that this owl is the most destructive species that we have, preying more on birds, and on larger kinds of birds, than any other owl that we have.

During this month one of my sons killed, near the Loch of Spynie, a little gull (*Larus minutus*). It is one of the rarest of our visitors; indeed this is the only instance of its having been seen in the district. This beautiful and delicate-looking little bird measured in length between nine and ten inches. The lower parts and the forehead are of a beautifully pure white. The tail is also white. The back of the head and a space behind the eyes are of a grayish black. The upper parts of the plumage are of a pale ash blue. Bill and irides, brown. Legs, red. Throughout the kingdom this is a bird very rarely seen. It is supposed to come from the east of Europe. In the summer the little gull has a black head, and the breast is tinged with a cream colour inclined to red.



CHAPTER THE FIFTH.

MAY.—Part I.

IN this region May is invariably ushered in by the croak of the landrail (*Ortygometra crex*). Generally this bird is heard on the 1st. If, however, the grass and wheat fields are backward, it is not heard till the 2d or 3d, but never later than the 3d, and by the end of the first week in May its call is heard from every patch of clover. The movements of the landrail are very peculiar and amusing; at one moment threading the clover with its head at the ground, and looking more like a weasel than a bird; the next, standing perfectly erect, and uttering its hoarse cry with a voice of brass. I saw one to-day standing upright between the legs of a cow, and crying boldly, as if perfectly aware that the cow was not an enemy. It is very abundant here during the spring and summer. Its departure cannot be so accurately known as its arrival, but it is seldom seen after the corn is off the ground, though a solitary bird or two is sometimes observed late in the autumn. During the night time, and on misty or rainy days, its cry is incessant, both in May and June. Though harsh and grating in the extreme, it is pleasant to hear, as associated with spring and returning warm weather. It breeds very soon after its arrival. The nest is usually placed in long grass or clover, and is slightly made of a little dry herbage. The eggs are about eight in number, of a pale brown, with a red tinge, and spotted with ash colour and a darker shade of reddish brown. The young, when first hatched, are covered with black down. Their food consists wholly of worms, slugs, and insects. The whole of the plumage is of a rather bright reddish brown, the belly fading into a yellowish white, and the feathers of the

upper part having a dark brown stripe down the centre. The bill is pale brown ; the legs of a dull flesh colour ; the irides are hazel. In the autumn the landrail is extremely fat and of a very delicate flavour. Before breeding, when they first arrive, they are also in good condition, but soon become dry and lean.

Swallows, martins, swifts, and wheatears become numerous. The owls hoot now very much, and though none breed very near the house, I hear them every night in the ash-trees. I shot a brown owl to-night (May 1, 1847). The tawny owl (*Syrnium Aluco*) is by no means rare. Its usual abode is in some ivy-covered wall or tree, where it lays its round white eggs. It is marked much like the long-eared owl, but has not the same yellow tinge on its plumage. It is also a rounder and heavier looking bird, with shorter wings and very large head and eyes. The latter are black. It is a remarkably noisy bird, and in the more solitary woods during the spring time its loud hooting may be heard at all hours of the day. It preys principally on mice, but also on small birds, etc. Altogether, however, I imagine that its good deeds in the way of killing mice far outweigh any mischief it may do amongst young birds during the breeding season. The tawny owl seems more sociable than any other species. I have known one brought up by hand frequent my garden for several years, and then I lost it by an accident, and not by any inclination of the bird itself to wander.

May 1 (1852).—A sparrow-hawk (*Accipiter nisus*) is constantly hunting the birds, and destroying them in the shrubbery. This bird is perhaps the most common hawk that we have in this county. Like others of the same family they vary much in plumage. When young, the upper parts are brown, whereas in the adult bird they are of a fine dark ash colour ; the lower parts white, with cross bars of brown in some individuals. These bars have a very red tinge. The eye varies, like that of the goshawk, from pearl colour to bright yellow inclining to orange. Like the goshawk, too, there is a very great difference in size in

the different sexes. The sparrow-hawk attacks boldly not only small birds but house-pigeons, wood-pigeons, partridges, etc. It is extremely destructive to tame pigeons, hunting frequently close to houses. It glides rapidly through the buildings, and carries off a pigeon, though very much heavier than itself. The nest is placed on trees, and sometimes on rocks. The eggs are dirty-white, with a few red-brown spots. When in the air, even at a considerable distance, the sparrow-hawk is easily distinguished from the kestrel or merlin by its rounded wings, while those of the latter birds are sharp pointed, having the outside quill-feathers longer than the rest. The sparrow-hawk is not difficult to train, and the female will kill partridges, land-rails, etc., with ease. Like the goshawk she is apt to perch when disappointed in her flight.

The young thrushes, blackbirds, robins, and hedge-sparrows will soon be hatched ; but the greenfinches, chaffinches, etc., although their nests are nearly completed, have not yet laid any eggs ; the insectivorous birds being the first to build.

The hedge-sparrow (*Accentor modularis*) is a common little bird, though nowhere very numerous. Like the robin it is pugnacious, not allowing others of the same species to inhabit its immediate vicinity. The hedge-sparrow frequents the gardens and hedges more than woods, and builds in low bushes and at the bottom of a hedge. The nest is made of moss, dried grass, etc., neatly lined with hair. The eggs are of a beautiful and uniform blue. The song is sweet, though not powerful or varied. The food of the hedge-sparrow consists of small insects, and it is quite harmless in the garden, never touching the fruit. Its plain dark plumage is too well known to require description.

The redbreast (*Erythacus rubecula*) and its habits are known to all, and with all this bird has been a favourite. Its tameness and perfect confidence in man are its greatest protection. Many instances occur of the robin entering boldly the house of rich or poor alike, and claiming its share of the breakfast table or such crumbs as it can pick up. It fre-

quently happens that the same robin returns for several winters in succession to a house, claiming shelter and food with the confidence and familiarity of a domestic bird ; nor are these favours ever refused. It is, however, a very quarrelsome and pugnacious bird to others of the same species, fighting desperately and savagely. In consequence of this quarrelsome disposition, though very numerous and widely scattered over the face of the country, each pair of robins requires a certain domain of its own. It is a very striking thing in this country, and one which I have often remarked, I cannot recollect stopping five minutes in any part of any wood, however wild or distant, without seeing a robin, and even in the most remote and solitary places the bird seems as tame, and possessed of as much confidence, as if bred and protected in a garden. Whenever I stop to eat my biscuit or luncheon, when shooting or wandering in the woods, a robin invariably appears, and often picks up the crumbs which I fling to it, close to my feet, or at most, waits only till I have retired a few paces. This shows that the robin, though nowhere in flocks, is one of the most numerously scattered birds that we have. Whenever the gardener is at work, the robin is at hand, close to his spade or rake, to pick up the worms or grubs which he turns up. Its food consists of worms, insects, etc., it also eats carrion, and I have seen it picking away at a dead rat, a bone, or even at a dead bird. It is very fond of crumbs of bread, placed for it at a window, driving away every other bird, even the thrush or blackbird, till its own hunger is satisfied, or till it thinks fit to retire. The nest is formed of moss, dead leaves, and a variety of substances, lined with hair. It is placed in holes of walls, decayed trees, ivy, and frequently on the ground, in nettles, coarse grass, or at the root of a tree. The eggs are yellowish-white, thickly spotted with pale red. The young birds, before their first moulting, are quite unlike their parents, not having the red breast, and being of a pale gray brown spotted all over with lighter spots.

The greenfinch or green grosbeak (*Fringilla chloris*) is one of our commonest and certainly not the least beautiful of our birds. It breeds everywhere, but more frequently in gardens and cultivated places than in dense forests. In winter they collect in very large flocks, and feed in the rick yards or stubble fields. The food of the greenfinch is almost wholly grain, excepting when it has young, and these it feeds on grubs and caterpillars. Indeed, almost all grain-eating birds rear their young on insects and caterpillars, thus compensating for the grain they devour at other times. The greenfinch seems particularly partial to wheat, feeding in great flocks on the new-sown fields. It cuts the husk off the grain with great quickness and skill. The nest is strongly built of moss interwoven with twigs and fibres. It is lined with wool, feathers, etc. The eggs greenish white spotted with brown. The greenfinch is easily tamed. Its song is monotonous but not unpleasant.

The chaffinch (*Fringilla cœlebs*) also abounds everywhere. Their nest is to be found in every kind of situation, in the low hedge or the tallest tree; very frequently in the fruit trees trained against the wall they build their exquisitely neat abode. The nest of no bird is more beautiful. The outside is generally covered with lichens, and the inside carefully lined with feathers, hair, etc. In a hedgerow surrounding a field where there were sheep, I found a nest almost wholly made of wool, both inside and outside. Though generally beautifully round when placed against a wall, the shape of the nest is made to adapt itself to the branches of the fruit tree with great care. In the centre of the densest and largest fir woods the chaffinch builds as frequently as in the garden or orchard; though perhaps the favourite tree is a lichen-covered apple or pear tree, in which case it is often difficult to see, in consequence of being built of the same colour as the surrounding branches. At the beginning of winter the chaffinches make a partial migration. They first collect in large flocks, which seem to consist wholly of females or birds in female plumage. It is certain that during winter they

are comparatively scarce. Again, in spring they reappear everywhere, uttering their loud clear note. Gardeners have generally a great enmity to these birds, as they are very destructive to some seeds—those of the radish, cabbage, etc. At the same time, they fully compensate for all the mischief done in this way by destroying vast quantities of insects and caterpillars. The egg is a light purplish ash-colour streaked and clouded with brown.

The goldfinch (*Fringilla carduelis*) is too well known to need description. It is now very rare in this district, indeed it has almost entirely disappeared. A few years ago it was not at all uncommon, building its beautiful little nest in many of the orchards and gardens. At present I occasionally see a pair or two, but have not lately heard of any breeding here. The bird-fanciers of the country attribute its disappearance to some bird-catchers "from the south," who seem to have caught nearly all the old birds in the district. No bird is more easily taken by means of a net and call-bird than the goldfinch. The nest is commonly placed in an apple or pear tree, very similar to, though still neater, than that of the chaffinch. The eggs are white, spotted, though not thickly, with dark reddish brown. Although nearly extinct in Morayshire, it is not uncommon on the opposite coasts of Ross-shire and Sutherlandshire. Their food is the seed of the thistle and other similar plants.

The common linnet (*Fringilla cannabina*) is spread abundantly over the country, breeding in furze bushes and other dense growing shrubs, though more frequently in the furze than in any other plant. Its nest is made of grass and dried fibres, with a little moss, and lined with wool. The eggs are bluish white, speckled with reddish brown. The linnets collect in immense flocks towards winter, sometimes covering the top of a large tree, or wheeling in clouds over stubble fields where groundsel and other seeds which they feed on abound. They are very fond, too, of turnip seed.

To the common observer the mountain linnet (*Fringilla flavirostris*) differs so little from the common linnet as not to

be distinguished except by close inspection. It is rather a more slender bird, and has not got the bright carmine-coloured forehead and breast of the latter bird. They are otherwise very similar. The feet of the *fringilla flavirostris* are black. In the common linnet they are brown; the bill is yellow in the former, that of the latter is blue gray. It breeds higher in the country, frequenting the mountainous parts, and building in the heather or in the small detached patches of furze which stretch upon the hills. The egg is similar to that of the common linnet. In winter they descend to the low country, collect in flocks, and are frequently in company with the other species.

The bullfinch (*Pyrrhula rubicilla*). This bright coloured bird is common in most woods, frequenting those most where there are larch trees. It is a very familiar and tame bird, and soon forms an attachment to its feeder. It is a great favourite amongst bird fanciers on account of its docility and the ease with which it learns to whistle tunes. In Germany the teaching of bullfinches is much practised, and with great success. In this country it is not so much attended to. In confinement the bullfinch is subject to fits; and it very often undergoes great changes of plumage, becoming much marked with black; in some instances, indeed, I have seen it change into a complete black. The nest is rather loosely made of moss, fibres, etc.; the eggs are of a dingy blue-white, marked with dark spots, principally at the larger end. The hen bullfinch sits very close, sometimes even allowing herself to be lifted off her eggs, and immediately returning to them.

I have seen the hawfinch or grosbeak (*Coccothraustes vulgaris*) on the opposite coast of Sutherlandshire, but have not seen it in Morayshire. A bird was described to me as having been seen near Forres which I have little doubt was the hawfinch.

May 3.—We catch plenty of trout from two pounds downwards. The week before last we killed nine gray geese, but none since, though a few are still left. The geese generally leave us about the 3d or 4th May, but from the quantity of snow on the

hills this season [1847] they should naturally remain longer. The gray lag-goose (*Anser ferus*), though I hear that within the memory of many now alive it was a very common bird, is now seldom seen in this county. In the early part of the winter I have occasionally shot them feeding in the swamps; but their visits seem quite uncertain and irregular. To my surprise I found this species of goose breeding in considerable numbers in the islands and about the shores of some of the Sutherland lakes. I say, to my surprise, as I had always been told that the goose which bred in those places was the bean-goose. They lay from five to seven eggs, and place their nests, which are exactly similar, though, of course, on a larger scale to that of a wild duck, either in the rank heather, or in any other long herbage; some that I found were imbedded in the wild garlic which often clothes the small islands of the lakes with its bright and beautiful green. They breed early in the year. The *Anser ferus* appears to me to be more inclined to graze on the short grass and other herbs than to seek out the corn-fields like the bean-goose. There seems no doubt of the gray lag-goose being the original of our tame bird. They are exactly similar, bearing the same proportion to the farm-yard goose as the mallard does to the tame duck, and breeding also with the tame goose; not rarely, but without the least shyness or hesitation, and the young produced breed freely, and are scarcely distinguishable from their parents, perhaps rather larger than the wild, and rather smaller than the tame birds. The bill of this bird is yellow, and the feet flesh-coloured.

When the season is late the fish are also late in taking the fly. The natural fly does not come to maturity this year as early as usual, in consequence of the herbage not having come up; and the want of flies on the water keeps the fish from coming into the streams and pools of the river, where the angler expects them.

There is much snow on the Monaghleahd mountains this year (1847); and in consequence of this melting gradually, from

the heat of the noon-day sun, the water rises at a certain hour daily ; here, at Dulsie,* the rise takes place about three or four in the morning. Having risen for an hour or two, it again falls to its usual level.

May 5 (1852).—I looked for the nest of the peregrine to-day in the cliffs between Burghhead and Lossiemouth, and found that it is placed not as usual on a ledge of rock, but quite within a small hole, in a place apparently more suited for a jackdaw to build in. Below the nest at the foot of the cliff we found a drake teal partly eaten, but quite fresh. The falcon must have carried it about three miles. These cliffs are fine bold rocks looking over the sea, with lovely green little nooks covered with primroses and blue hyacinths. When the birds were disturbed they flew straight out to sea till they looked like specks, and then suddenly reappearing they alighted on the rocks.

May 6.—The salmon-fry begin to appear.

May 7.—I observe a flock of bean geese in the bay, probably the last I shall see this year, as it is time for them to be nesting in the far north. On this day, also, the spotted fly-catcher (*Muscicapa grisola*) appeared in the garden, where it builds every year in one of the apricot trees (in 1847 I saw it for the first time on the 13th). This lively little bird is a very regular visitor to this part of the country, though not one of the earliest. Indeed, it does not arrive until the 8th or 10th of May. Certain portions of the garden-wall and certain trees are taken possession of year after year. In my garden at Elgin at least six pairs breed. The nest is covered outwardly with spider-web and other substances, which make it so much the colour of the old stone wall that it is very difficult to see. It is very small too, being only the section of a circle, the wall forming one side of the nest. It sometimes spreads its nest out to adapt its shape to the branches of the trees or angles of the wall. The

* A rocky gorge where General Wade's road crosses the Findhorn by a picturesque bridge. St. John often went there to fish and to seek nests of the crossbill, etc.—ED.

old birds are very tame and familiar, apparently quite aware of their safety. They sit on some flower stalk or convenient branch, darting off every minute after the passing insects. I have observed one peculiarity in this fly-catcher. If disturbed off their eggs they return almost immediately, not appearing to be frightened away for a long time like most other birds. It leaves us early in September. The spotted fly-catcher is of pale brown above, slightly spotted with a darker colour, and white below. The egg is bluish white, closely spotted all over with a rusty red.

May 8.—I have to-day seen the redstart (*Ruticilla phoenicea*) in Dulsie Woods, near the Findhorn. This bird is a rare visitor, though breeding occasionally in favourite spots in the district. As far as I can observe and ascertain, it arrives here during the first week in May. The bird I saw on the 8th was sitting on the summit of a fir tree pouring out a remarkably rich though short song. It was some time before I could discover what bird was singing, as whenever I approached it glided down and flew to a different tree, again singing its soft but loud song.

Wholly insectivorous, the first frosts of autumn deprive the redstart of its food, and it therefore leaves us early. It builds in old walls, crevices of rocks, and in holes of trees.* The egg is pale but clear blue. The throat is black, the forehead white. The upper part of head and back a blue gray; breast, sides, and tail a bright chestnut or light brownish red, feet and bill black. The female is of a much more dull and sombre colour. The young also have little of the bright plumage of the adult male, and are spotted with dingy white, always, however, shewing the red tail, though of a much duller shade.

May 9 (1852).—At Spynie heard the cuckoo for the first time this year. The cuckoo (*Cuculus canorus*) frequently falls a victim to its hawk-like appearance when on wing. Like it, it is of considerable service in destroying great numbers of large

* For several years a pair bred in the wall of the "ha-ha" at Craigmuck, near Edinburgh. I dare say they do so still.—C. I.

insects. As the nightjar preys on those that fly by night, the cuckoo, feeding only during the day, keeps down the number of diurnal insects. Though the cuckoo makes no more nest than the nightjar, she at any rate takes care to provide her eggs with a nest and foster-mother. She drops her egg in the nest of the hedge-sparrow, tit-lark, or some bird of similar habits, and which builds near the ground. The egg is small in proportion to the bird. It is of a dull white, closely mottled with ash and brown of different shades. Though small as regards the size of a cuckoo, it is slightly larger than that of the tit-lark, or other bird in whose nest it is placed. Though the cuckoo only places one egg in each nest, it is probable that she lays eggs in two or three different nests. On their first arrival in Scotland they appear to haunt the higher grounds. In the mountains of Sutherland I have frequently seen considerable numbers together, and while passing over several miles of muirland the cuckoos have been in sight for several hours at a time, in small companies of two or three. When they come down to the more wooded parts of the country they seem constantly in motion, either flying in pursuit of each other or from tree to tree, but always uttering their pleasant but monotonous note. I first hear them in this immediate vicinity about the third week of April, or sooner sometimes. One haunts my garden for a considerable portion of the spring. The upper part of the plumage is wholly of a pale blue ash colour, the throat and front of the same. The lower parts are white, with a slight tinge of gray, and closely barred with ash brown. The irides are yellow. The legs and feet are also yellow and short. The toes are placed two forward and two backward. The mouth has the same wide gape as that of the nightjar. The young have their upper plumage of a fine red brown, rather dark, barred with a paler shade. The under parts dull white, barred with black or dark ash. The irides of the young are much darker in colour than those of the adult bird, inclining more to red brown. Though so different in colour from the old bird, the young cuckoo can

be mistaken for no other British bird. The young are very tame and unconscious of danger. Sitting on a pailing or gate, they allow themselves to be approached without moving. It is difficult to know exactly when the cuckoo leaves this country. The old ones seem to disappear before their young. The latter remain till about the middle or end of August.

Whilst fishing in the upper part of the river on the 8th of May, I saw numbers of crossbills and siskins in the same beautiful woods, and found two nests of the former, from one of which the young birds could not have flown above a day. The crossbill (*Loxia curvirostra*) has some peculiar habits not much known to the ordinary observer. I have never discovered either the eggs or the young birds in the nest, owing much to the early and also uncertain periods at which it breeds.* Their nests, as well as those of the siskin, are scarcely ever found, though both birds breed plentifully in this country.

I have seen the old birds feeding newly-flown young ones at different times from April to August; and, to-day, at no great distance from the nests, I shot young birds with the down still attached to the feathers; and also an old female with the evident marks on her breast of having sat upon eggs very lately. In June I have seen the crossbills in large flocks, a great proportion of which were evidently young birds; they appear, though not exactly to migrate, to wander much, and to shift their quarters from one wood to another according as they find a supply of fir cones, the seeds of which appear to form their only food in this country. When the crop of cones is deficient in

* The nest and eggs were afterwards discovered by William Macdonald in Balnagown woods, near Tain, Ross-shire, in March 1854. The nest contained four eggs. The parent birds were killed at the same time. Mr. St. John writes (March 19, 1854) in triumph to Mr. Hancock respecting them:—

“At last I have them safe, four beautiful eggs like a greenfinch’s, longer in the shape, the nest also with the branch. I fear the old birds have travelled too much to skin well; they are a green one and a red one. The nest is just like the one we found, but more compact from not having had young ones to spoil its shape. I consider it a great victory. I have a tame crossbill sitting by me now, eating fir cones.”—ED.

one place, they betake themselves to some other wood where they are plentiful. When occupied in cutting off the cones, they are so busy that a snare on the end of a stick may be drawn over their heads. They appear to cut off and drop to the ground great numbers of cones which they do not open, and the ground is strewn with cones under the trees where the crossbills feed. When they find one which is full of seed they hold it firmly in one of their powerful feet, and dissect it at their ease with their curiously-shaped bill. In confinement, the crossbill feeds on hemp and other seeds. They shew a great variety in plumage; the males are in some instances of great brightness, the greatest part of their plumage being of a bright brick red; the females, brown, inclining to green, and tinged with yellow on their rumps. The young ones are much marked with longitudinal spots of a darker colour; the size and length of the bill also varies much, some being far more crossed than others. The call of the crossbill is peculiar, and attracts the attention immediately, as being unlike that of any other of our small birds. While feeding and climbing about the branches of a larch or fir tree they utter a gentle chirp to each other; sometimes, when suddenly alarmed, every bird in the flock is suddenly perfectly still, clinging close to the branches or stem of the tree. The nest is easily distinguished from that of any other bird; it is flat, loosely built, and can be nearly seen through; it consists of grass and wool, bound together with tolerably large twigs of the fir tree. The latter appear to have been cut off by the scissor-like bill of the old bird for the express purpose of keeping together its ill-made nest. It is placed on horizontal branches of the Scotch fir at no great height from the ground, in some instances within reach of the hand. My description is taken from several nests which I found in Dulsie woods; the eggs are very similar to those of the greenfinch, but slightly larger. The crossbill appears to require drink frequently; in the woods which it frequents I have often seen it fly down to the pools of water.

May 10.—During this month the oyster-catchers remain in larger flocks than at any other time of the year, although many are breeding far inland on the stony banks of the Findhorn, Spey, and other rivers.

The partridge covers its nest and eggs with perhaps greater cunning than any other bird; not only entirely concealing the nest itself, but so disposing the surrounding grass that no vestiges of its track to and fro can be seen: they commence laying here about the 10th of May. The landrails are about a week later.

May 11 (1852).—We heard a bird singing in the garden, whose note was new to me; on watching, we found it was a blackcap (*Sylvia atricapilla*), a very rare bird, so far to the north. I have only on one other occasion ascertained the presence of this bird. In the following June and part of July I heard every day and all day, from 3 A.M. till 10 P.M., a strange song in the shrubberies close to the house. Though I thought I recognised the full rich song of the blackcap, I could not at first make sure. The bird skipped about so quickly and quietly in the densest part of the foliage, that although I heard it at all hours close to me, it was several days before I could see it sufficiently clearly to be sure of its identity. I saw no female with it, but from its singing so constantly near the same part of the garden, I was inclined to think that it had a mate. The prevailing colour of the blackcap is ash colour, inclining to olive, but it is easily distinguished by its black head, or rather by the top of the head being black. In the female this part is brown. The egg is whitish, spotted with ash colour and brown.

May 12 (1852).—The banks of the river are now very beautiful, the sloe, the hawthorn, the gean, the bird-cherry, and other shrubs being in full bloom.

May 16 (1852).—I found a merlin's nest with three eggs. The old birds appear to watch near it by turns to keep off the hooded crows from their eggs, till they begin to sit. The merlin (*Hypotriorchis asalon*) is, in its adult state, very like a miniature pere-

grine, and has the same bold and tractable disposition. It is easy to train, though of a delicate constitution in confinement ; and it seldom if ever survives its first moulting when deprived of liberty. Its flight is very rapid and beautiful, and its manner of striking its prey resembles wholly that of the peregrine. In a wild state it preys on small birds, snipes, and even partridges. It builds no nest, placing its eggs in a slight depression of the ground, amongst the long heather which fringes the sides of some mountain glen or ravine. The eggs nearly resemble, except in size, those of the peregrine, being closely marked and blotched with a rich red brown. The upper parts of the merlin are dark-blue ash colour. The lower parts reddish white, with longitudinal streaks. It has the same full dark eye, characteristic of the long-winged falcons. The young have no blue colour, but are of a darkish brown above. The merlin is easily known from the kestrel or sparrow-hawk when on wing by its more rapid and direct flight, resembling that of the peregrine, and by its long-pointed wings which reach to the extremity of the tail. In the days of falconry the merlin was in great request, and was the favourite hawk of ladies, because of its fine temper and also its size, not rendering it too great a weight for a lady's wrist. I have sometimes trained the merlin to fly at small birds, such as larks, etc., and I know nothing of the kind more beautiful than the flight of two merlins in pursuit of a lark when the latter mounts well into the air, as it does when pursued, in rapid circles, till nearly lost to sight, sometimes suddenly dropping to the ground and concealing itself so quickly and completely in the herbage as to escape the quick and keen eye of its pursuer, who, however, generally alights at the same spot, and searches for its prey with a keenness unequalled perhaps by that of any other hawk. So courageous is this beautiful little bird, that if trained to do so it will fly at and strike either grouse or black game, though without much effect. I have seen my tame merlins eat worms and insects, and this too when not pressed by hunger ; so that I have no doubt that this sort of food is fre-

quently resorted to by most of the small hawks when larger game is difficult to procure.

May 17 (1853).—We went to the rocks at Covesea to look for the peregrine's nest; for some time the old birds did not shew, and although I fired near the place at a blue rock pigeon, the female falcon did not leave her nest; but while I was there, a peregrine (a male) which I at once knew to be a stranger, as he was a last year's bird, and still quite brown, came in, apparently from Ross-shire. The male peregrine belonging to Covesea immediately appeared and attacked him, and while they were fighting, the female came off her nest, and the two Covesea falcons drove the stranger apparently back to Ross-shire, as we saw them going towards that coast, till lost in the distance, presently the two Covesea birds returned alone.

Though much killed down by gamekeepers, the peregrine (*Falco peregrinus*) is still by no means uncommon, and breeds regularly in different parts of this district, such as on the rocks of the Findhorn River, near Altyre, and on the cliffs above mentioned between Burghead and Lossiemouth, and in other suitable spots. There is no handsomer or more courageous hawk than the peregrine. In a reclaimed state its confidence and boldness are wonderfully great, and when wild it does not hesitate to attack birds far heavier and larger than itself. The upper part of the plumage in the mature bird is a rich slate colour. The lower parts white, more or less barred with dark-brown or black. They vary, however, very much in the shade and depth of colour, both of the upper and under parts. The throat and breast in some birds have a fine cream-coloured tinge. The cere, legs, and feet are bright yellow, the feet remarkably strong and large. Altogether, I know no bird which has so firm and muscular an appearance as this falcon. The irides are dark brown, approaching to black, and the eye is very full and prominent. The peregrine builds no nest, but lays her eggs, four in number, in some slight depression in the rock or turf growing on the cliff. Year after year

the same range of rock is tenanted by a pair of peregrines, and if they are killed the next season a fresh pair usually appears. If one is killed the survivor immediately finds a mate and continues the duties of incubation or feeding the young without apparent interruption. The young at first, and till nearly full grown, are covered with thick white down. For the first year they are brown above and white below, with *longitudinal* instead of transverse streaks. As soon as they are able to hunt for themselves the young are driven away by the parents, who admit of no rivals within a considerable distance. In the winter peregrines are seen far more numerous than at any other time. There are always some hunting the large marshes, such as the Loch of Spynie, etc., and they may generally be seen either hunting for their prey, or perched on some tree or rock near these places. I have frequently known a peregrine appear suddenly at particular spots when I am shooting, and carry off a partridge that I have flushed, often singling out a wounded bird, as if knowing that it would be an easy prey. The peregrine seldom strikes a bird on the ground, preferring to make its swoop at one on the wing, and either carries it off at once or strikes it with great force with the two hind talons, and then either letting it fall dead to the ground or catching it halfway in the act of falling. So strong on the wing is this bird that a full grown partridge appears to be no incumbrance to its flight. The first thing that the hawk does on knocking down its prey, if it is not already dead, and often even if it is so, is to break the neck of the victim by bending the head back. It then begins with the brains, and after that eats all the most fleshy parts. The wild fowl on seeing the peregrine approach betake themselves, if possible, to the water, knowing that as long as they keep to this element they are safe. I have often seen the falcon make several swoops close to the heads of ducks, etc., while swimming, as if endeavouring to make them rise, but always without success. She will not strike a bird too heavy to carry off at once while over the water, but waits till its prey is flying

over the land. The peregrine was always very much in request by falconers, owing to its courage and generous temper and disposition. It is the easiest trained of any hawk, and it appears not only to be sociable and fond of company, but also to be capable of considerable attachment to its master. If regularly fed it may be allowed full liberty, seldom leaving its home or attacking the poultry, except when driven to it by hunger. The eggs of the peregrine are marked all over with rich red-brown spots, and are more round than oval. There is considerable difference as to plumage and size in different individuals, and though the female is larger than the male, as in all hawks, the difference in this respect is not so great as in the goshawk or sparrow-hawk. The female when trained is supposed to be not only stronger but of a fiercer and more courageous disposition.

May 17 (1847).—I do not understand why the oyster-catchers remain in large flocks about the shore, as I suppose they must now be laying. In fishing to-day I caught a martin, which dashed at the artificial fly.

Everywhere on the lakes are broods of young wild ducks, either swimming in close order behind their mothers, or all huddled together in a heap on some little island or projecting point of land.

As we were out driving the other day, a teal came fluttering out of the dry ditch by the roadside, and for above a hundred yards continued flying and running almost under the horse's feet. I found that she had a number of young ones unable to get over the wall, so we helped them into the adjoining wood. They were a long distance from the water, and had very rough ground to pass over to reach it. I remember exactly a similar circumstance happening to me in Ross-shire, when also I saved the lives of a young brood of teal by lending them a helping hand. These instances prove that, notwithstanding the instinct of birds, which generally enables them to keep their young out of harm's way, they occasionally get them into a situation not

only of difficulty, but where any dog or mischievous boy coming along might destroy the whole brood.

At every ebb tide now, the terns fish with great perseverance for the sandeels, on which they almost entirely feed.

The month of May this year (1847) appears to have quite changed its character; instead of being warm and genial, we have nothing but cold and cutting east winds; and the mountains have lost but very little of their winter covering of snow; indeed, on the higher inland mountains their white dresses extend down very nearly as low as in the winter. But notwithstanding the bad weather there is much to amuse and interest one in the sheltered parts of the low country. Every plant and flower is bursting into beauty, in spite of the cold blasts; and the small birds are in full activity, and seem at the height of their happiness. It is also a constant source of amusement to us to watch the various ways of building, and the different nests of the small birds. Each nest has its own character, and each bird its own place of concealment. The little willow wren (*Sylvia trochilus*) forms one of the most interesting nests, which it places either under a bush in the flower-garden, or in a rough grass-field, where it forms a kind of dome-shaped nest, made to assimilate completely with the surface of the surrounding ground.

This diminutive visitor is very abundant. It arrives here about the 20th of April, and soon afterwards is heard in every wood and garden uttering its loud song, in which, however, there is no variety, as it incessantly repeats the same strain during the whole day. It is, however, a lively, merry little bird, constantly in motion and constantly singing, and always associated in my mind with the first return of spring. Like many other migratory birds it is very regular in its attachment to particular places, and I have known it build its nest for several years in succession under the same shrub. Its nest is large and covered over. It is warmly lined with feathers, etc. The bird seems to have a particular liking for white feathers.

The eggs are white, round, and marked with numerous spots of a chestnut colour. The willow wren is of a pale greenish brown above, tinged with yellow. The lower parts are white, also inclining to yellow. There is much difference in the shading of these birds, some being far more yellow than others. Legs are light brown, also inclining to yellow. There is a distinct streak of yellow, or yellowish-white, over each eye.

The common wren (*Troglodytes parvulus*), too, is very choice and careful in the structure of her nest, and sometimes builds in the most singular situations. I saw one this year which was built in a cactus, that hung from the roof of a greenhouse. Every time the little bird wished to add a leaf, or a piece of moss, she had to squeeze and twist herself in through a small hole left for the entrance of a vine stem. Her perseverance and determination were extraordinary; for in spite of all difficulties she managed to form an immense nest in this singularly chosen and picturesque abode. It is difficult to imagine what could have put it into her head to come into the greenhouse at all, and through so awkward an entrance, surrounded, too, as she was by places far more suitable and easy of access.

Like the robin, this bird is very generally spread over the country, both in the vicinity of houses and in the solitary woods; and even on the hill-side, when grouse-shooting, the wren frequently rises close to my feet, chattering noisily enough for a bird six times its size. When waiting in a pass in the woods, the sportsman is often startled by the angry clamorous cry of this little bird as, perched on a branch close to his head, it jerks its tail rapidly up and down, and seems to scold furiously at the intruder. I often find the nest of the wren in the midst of the woods, placed in a fir tree, furze bush, or in the cleft of a rock, sometimes on the ground. In the woods the nest is formed of green moss, lined with feathers, hair, etc. In the gardens, where it breeds very frequently and numerous, and where the ~~nest~~ is more exposed to observation, the wren forms her nest of

a variety of substances, adapting them so completely to the surrounding objects that it is often very difficult to distinguish it even when pointed out. I know of no bird so very cunning as the wren in this respect. She not only makes her nest of materials exactly corresponding with the surrounding leaves, but also shapes it so as to fit in and harmonise with the branches, so much so that the outline of her nest is completely lost to the eye, and the whole has the appearance of a heap of leaves or rubbish collected by chance, instead of a firmly and curiously built fabric. On leaving it she often disposes a dead or green leaf before the aperture, so as to completely conceal it. Though very apt to desert her nest before she has commenced laying her eggs, when this operation has commenced few birds are less likely to be frightened away by being looked at. The nest is warmly lined with feathers, pieces of thread, hair, worsted, etc. The eggs are white, slightly spotted with red, and are six or eight in number—sometimes as many as nine or ten are laid. Though the nest is so large in proportion to the size of the bird, it is very quickly built. I observed a very curious thing with regard to a wren in the spring of 1852. A wren had built and hatched her eggs in a nest placed in a narrow hole in a wall. It seemed to me that as her young ones became full grown the nest would be rather small for them. The old birds became aware of this, and built a large nest in a tree opposite the first nest, and as soon as the young ones were able to fly at all, they betook themselves to the newly-built abode, which was larger than usual, and not lined. For some little time afterwards whenever there was a heavy shower, and these happened to be rather frequent, the whole brood, eight in number, took refuge in the new nest. They also roosted in it every night for a short time. The food of the wren consists wholly of insects and small caterpillars, which it collects under dead leaves, etc.

May 18 (1853).—Shot a female badger early in the morning as she was returning to her hole. She looked as if with young, but on dissecting her we found that she was com-

pletely gorged with young rooks, probably picked up under a rookery.*

May 19.—Rennie brought home another owl's egg from a rabbit hole in the woods behind Woodside. The last which he brought was on the 2d April.

May 19 (1851).—This morning at 3 A.M. I was at Spynie for the eggs of two birds which are very rare, the shoveller duck and the little water rail, and was fortunate enough, with the help of my retriever, to find a nest of each. They breed very rarely in this country.

May 23 (1847).—The landrails have already several eggs, as have the lesser willow wren, and other late coming birds.

I have often observed that the black-headed gull eats a great deal of corn in the newly-sown fields ; and I now find that the lesser black-backed gull (*Larus fuscus*) does the same, as I shot one which had a handful of corn (oats and barley) in its crop, mixed up with worms, grubs, etc. This bird resembles the greater black-backed gull in plumage, but is considerably smaller, and the feet are of a more yellow shade. It is more numerous. On some islands on the lochs of Sutherland I have seen hundreds breeding close to each other. The nest is placed on the dry ground and consists of rushes and grass. It feeds on almost any animal substance, including carrion.

[Mr. St. John was in Sutherland for a few days in May.]

* On the same day of this month I saw for the first time a woodcock carrying her young. (See description of woodcock—August.)—ED.

CHAPTER THE SIXTH.

MAY.—Part II.

May 23 (1848).—My peregrinations in Sutherland were most amusing. I started from Bonar Bridge in a light boat on wheels, drawn by my old gray pony. We went *viâ* Oykel, Inchnamph, Scourie, Durness, Aultnaharrow, and back to Bonar, through a most wild and extraordinary country ; launching our boat here and there, sometimes dragging it over the hills where horse could not go, in order to get at nests of the osprey, black throated diver, and wild geese. The eagles' nests had been already robbed by the shepherds, who have found out their value. We, however, procured six eagles' eggs, besides peregrine falcon's. A shepherd told us of an osprey's nest, or, as he called it, an "eagle fisher," on an island in a loch near Scourie. We started at daylight over bog and rock, dragging our boat with us, and on reaching the loch I was delighted beyond expression at seeing the two ospreys, one of them on the nest, and the other soaring above, uttering cries of alarm at our approach.

The nest was placed in a most curious situation. About a hundred and fifty yards from the shore there rose from the deep water a solitary rock about ten feet high, shaped like a broken sugar-loaf, or truncated cone ; on the summit of this was the nest—a pile of sticks of very great depth, evidently the accumulation of many breeding seasons, as the osprey returns year after year to the same nest. How this heap of sticks withstood the winter gales without being blown at once into the water, puzzled me. In a crevice of the rock was a small tuft or two of green, otherwise it was perfectly bare and steep.

We launched our little bark, and were soon pulling strongly

against a head wind across the loch. The female osprey allowed us to approach within two hundred yards or so, and then leaving her nest, sailed upwards with a circling flight, till she joined her mate high above us.

Having reached the rock, and with some difficulty ascended to the nest, our disappointment may be imagined when we found it empty. From the old bird having remained on the nest so long, we had made sure of finding eggs in it. The nest itself, however, was interesting to me, perched as it was on the very summit of the rock, and composed of large sticks, every one of which must have been a heavy burden for a bird of the size of the osprey. In the centre of the pile of sticks was a cup-shaped hollow, the size of a boy's cap, lined with moss and dead grass, and apparently quite ready to receive eggs. It was of no use lamenting, so we turned our boat towards the landing-place, and drifted back quickly and in silence. Some hooded crows, perceiving that both the ospreys were off their nest, immediately made a dash towards it, and I was much amused at seeing the skirmishing between these mischievous and cunning marauders and the two ospreys; the latter fighting simply *pro aris et focis*, having no eggs or young to defend; while the crows fought lustily in the hope only of finding something in the nest, calculating probably, as we had done, that the ospreys had not been sitting in an empty nest.

Our landlord at Scourie having told us that he had heard that the osprey was building on an island in a loch about a mile from our road, we left the horse and boat under charge of a bare-legged and bare-headed boy, at the place he mentioned (a small bridge about three miles from Scourie), and went to a point of rock, from which we could command a view of the loch in question. Through a glass we immediately discovered the nest of the osprey, built in exactly a similar situation to the last; that is, on the summit of a rock about eight feet high, shaped like a truncated cone, and standing exposed and alone in the loch. On coming nearer, we could distinguish the white

head of the female osprey on the nest. The male bird was not in view. It was determined that I should remain concealed near the loch, while my two companions went for the boat. This plan was adopted for the double reason that I might be at hand to shoot any hooded crow who might attempt to take the eggs while the osprey was off, she having left the nest on our approach, and also that I might have a chance of shooting the old osprey herself in case she came within shot. I must say that I would rather she had escaped this fate ; but as her skin was wanted, I agreed to try to kill her.

For some time after the departure of my companions she flew round and round at a great height, occasionally drifting away with the high wind, and then returning to the loch. She passed two or three times not very far from me before I shot at her. But at last I fired, and the poor bird, after wheeling blindly about for a few moments, fell far to leeward of me, and down in the most precipitous and rocky part of the mountain, quite dead. She was scarcely down behind the cliffs when I heard the cry of an osprey in quite a different direction, and on looking that way I saw the male bird flying up from a great distance. As he came nearer, I could distinguish plainly with my glass that he was carrying a fish in his claws. On approaching he redoubled his cries, probably expecting the well-known answer, or signal of gratitude, from his mate ; but not hearing her, he flew on till he came immediately over the nest. I could plainly see him turning his head to the right and left, as if looking for her, and as if in astonishment at her unwonted absence. He came lower and lower still, holding the fish in his feet, which were stretched out at full length from his body. Not seeing his partner, he again ascended and flew to the other end of the lake, the rocks echoing his shrill cry. The poor bird, after making one or two circuits of the lake, then flew away far out of sight, still keeping possession of the fish. He probably went to look for the female at some known and frequented haunt, as he flew rapidly off in a direct line. He soon, however, came

over the lake again, and continued his flight to and fro and his loud cries for above an hour, still keeping the fish ready for his mate. I at length heard the voices of my friends, and we soon launched the boat. The osprey became much agitated as we neared the rock where the nest was, and dropped the fish he held into the water. We found two beautiful eggs in the nest, of a roundish shape ; the colour white, with numerous spots and marks of a fine rich red brown. As we came away, we still observed the male bird unceasingly calling and seeking for his hen. I was really sorry that I had shot her.

The osprey (*Pandion Haliaetus*) also breeds in the forest of Glenmore. I have also frequently seen it flying over the lower part of the Findhorn and also hovering over the Loch of Spynie and in other places. Its flight and actions are peculiarly graceful and interesting. When unmolested, the osprey builds in the same place for many years, adding only to the old nest. This is placed either on the highest part of some old ruin, on the peak of some rock which stands out from the water in a lonely highland loch, or, rarely, on the very summit of an old tree. The eggs are three in number ; the ground of a cream colour thickly spotted and blotched with a beautiful mixture of chestnut and cinnamon colour. The young ones are covered with a coarse dark coloured kind of hair at first, instead of the soft white down which protects from the cold the young of the peregrine falcon and other hawks. I have seen the male sitting on the eggs, though usually he appears to assist the female more by bringing her fish than by taking his share of hatching. Their manner of fishing is very interesting, hovering as a kestrel does over a mouse, the osprey seems to be motionless in the air till the prey is at exactly the right angle from her. Then dropping like a stone into the water, she seldom reappears without the fish in her powerful talons. Sometimes the osprey disappears completely under the water for a moment, at others she seems to catch the fish nearly on the surface. They appear to fish very often at a considerable distance from the nest, as I have seen

the male bird coming at an immense height with a fish in his claws, and evidently from a distance of some miles, to feed his mate while sitting on her nest placed in the centre of some inland loch. The upper part of the osprey's plumage is of a rich brown; the lower parts mostly white; the feet are of a gray-blue, short, but very rough, and thus well adapted for holding their slippery prey; the crown of the head is white, with brown spots; the irides are yellow, and the cere is blue; the outer toe is turned rather backwards, or at a right angle to the centre toe, thus enabling it to grasp more firmly; the wings have a longer stretch, in proportion to the size of the bird, than those of the eagle.

May 26 (1847).—The fishermen at Nairn found a very fine northern diver (*Colymbus glacialis*) drowned in the stake nets set for salmon. They tell me that it is not a solitary instance, as every year they get one or two at this season. It is not at all uncommon along the sea-coast during the winter, and more especially towards the spring. I have seen it, indeed, during most months of the year. Its manner of fishing is peculiar. As the tide comes in, the northern diver comes with it, fishing close to the edge of the water along the rocks, or even close to the sandy beach. I know no other bird of the kind which hunts so near the land. By waiting for it at some projecting point of rock, it is easily shot. The food of this and other birds of the same kind does not so much consist of fish as of other small aquatic animals; sea slugs, small crabs, etc., etc., form its principal prey. When alarmed, it seldom takes wing, but dives out to a considerable distance, and with erect neck inspects the threatened or suspected danger. When once at a good height, however, its flight is strong and rapid. Although I have seen the northern diver on the coast during the breeding season, and I have also seen it accompanied by a young one, evidently a very few days old, I never could find the egg or hear of it being found. I have, however, little doubt that it breeds on some of the most northerly and solitary parts of the island. This bird, owing to

its habit of fishing along the shore, is not unfrequently entangled in the salmon nets, where it is generally drowned. It is a large heavy bird; the one I saw to-day weighed about 16 pounds, but it is sometimes a pound heavier. The head and neck are black, with purple shades; on the neck are two broad bands of white marked with dark spots; the upper plumage of the whole bird is black, with small round white spots; the lower parts are white. The bill is strong and sharp pointed, colour black, feet of a dingy brown. The membranes are lighter than the toes. The egg is large and of an oval shape. Their colour is a dirty green marked with dark brown. The female is not so bright in her plumage as the male. The young birds, as far as I can learn, take three years to come to maturity, during which time the plumage gradually changes from a dingy mixture of ash colour and brown to the beautiful markings of the adult. The young in the downy state are beautifully marked in zig-zags of black, ash colour, and white.

May 28 (1847).—Walked to-day to Lochlee; saw the large nests made by the coots and dabchicks. The coot (*Fulica atra*) is to be found on every tolerably large piece of water or marsh. It forms a very large nest amongst the rushes, made of grasses and water plants. So strong are these nests that I have stood upon one without its giving way. I once saw one on the loch which the bird had fastened to a floating tree that had grounded in a shallow, but which, having again got adrift, owing to a rise in the loch, had been driven by the wind until it stuck fast close to the shore, where the old bird was still at work. One bird seems to remain in the nest while its mate brings it rushes, which the stationary bird disposes of by adding them to the already large structure, till it seems sufficiently high above the water, and solid enough to resist wind and weather. The eggs are from eight to ten in number, of a pale buff colour, studded with small spots of reddish brown. The young are hatched about the 10th of May, and immediately take to the water, swimming round the old birds, who attend them with great

care, pulling up the small water plants, etc., on which the young ones seem to feed. The coot is said to be good eating when properly dressed, and is in some request for the table in the south of England, where the punt-shooters are very fond of getting a shot at coots, as they sit very close to each other and high from the mud, affording a better chance than most other wild-fowl. They are very difficult to catch, however, if wounded, as they dive strongly, and on coming up again they raise only as much of their bill above water as enables them to breathe; in this way eluding the best water-dog. With their curiously-formed feet and claws they give a very severe scratch or cut if taken hold of carelessly. The coot is a very tame bird, and from its constant activity and familiarity is a great ornament to a piece of water. They feed on grass and water plants, but will eat corn and any food which is given to fowls without hesitation. The young are covered with black hairy down excepting about the head, which is nearly naked and of a bright orange colour, giving the little bird a very singular appearance. There are feathers both on the wing and below the tail of a coot very useful in fly-dressing. I have found the old coots in the month of July quite unable to fly, having lost the whole of their quill feathers in moulting, like the mallard and teal.

The golden-crested wren (*Regulus cristatus*) remains with us during the whole year in considerable numbers. It breeds very commonly in all the woods, particularly where there are spruce fir trees, as it is fond of building its nest on one of the horizontal branches of this tree, from the lower side of which it is hung. The nest is covered at the top, and built most artistically of moss and lichens lined with small feathers and soft hair and down. The eggs are from six to eight in number, very small, of a dingy white, very slightly spotted with a dull yellowish brown. The golden-crested wren is the most restless little bird that I know, constantly in motion, flitting from tree to tree and from branch to branch in search of the minute insects which form its food. During the winter the

fir woods seem to swarm with these birds, in company with different kinds of titmice, etc., who all pass in a constant stream through the woods, searching every tree as they travel onwards.

Whenever I sit down or remain quiet in a wood these birds appear flying from branch to branch, frequently coming within a few feet or less of my head, so intent are they on their hunting, keeping up a constant twitter or call to each other as if to avoid losing their company. In the garden, too, a stream of these small birds frequently seems to pass over, hunting from one end of the place to the other, and then going on in a straight line. Though so small and delicate a looking bird, I never observed them to look distressed in severe weather. It seems that they do occasionally migrate, as a captain of a ship has told me that great numbers of the golden-crested wren have pitched on his ship while at sea, so fatigued that they could be easily taken by the hand. There is no doubt that these and all insect-eating birds must be of the greatest service to mankind, as the thousands that we see of them live entirely on insects and the eggs of insects, which they search for and find where we could never destroy them; and which insects, if not kept under by the immense numbers of their feathered devourers, would so increase and multiply that our crops and fruits could never come to maturity. The golden-crested wren is easily known by its bright crest of yellow orange colour, and by its very diminutive size. I never distinctly ascertained the presence of the *Regulus ignicapillus*, or fire-crested wren, in this country. It appears to be very slightly larger than the *Regulus cristatus*, and is known by the crest being a deep fire colour edged with black. Very probably, however, they accompany the large flocks of the golden-crested wren. There is also another variety, or distinct species, very much resembling the golden-crested wren, which it only differs from in having no yellow crest at all. The only specimen which I ever saw was in the possession of Mr. Hancock of Newcastle, and is by that gentleman appropriately

named *Regulus modestus*; its plumage being modestly simple with no bright colour.

The common house-sparrow (*Passer domesticus*) abounds as much here as in most parts of the kingdom, and seems possessed of the same pert impudence and familiarity as elsewhere. It builds in holes of walls, under roofs of houses, and often in trees. In the latter instances the nest is a large loose-looking, but strong edifice, built outwardly of straw and hay, and lined with a great profusion of feathers, hair, bits of rag, and every sort of soft material which comes in its way. The eggs are bluish white, thickly spotted with grayish black, but are very different in different nests both as to size and colour. The sparrow is never seen to build far from human habitation. Though destructive to grain, and particularly to the first fields of wheat which become ripe, the sparrow destroys immense quantities of caterpillars and grubs during the breeding season. In towns the sparrow acquires a dirty, sooty, and often ragged appearance, but in the country it is a far more beautiful bird than is generally supposed; owing to its being so common it is not noticed, though a male sparrow is as richly coloured and finely marked a bird as we have.

The tree-sparrow (*Passer montanus*) seems badly named, as its nest is almost invariably, as far as I have ever heard quite so, placed in holes of old walls and similar places. Near Elgin, in Moray, this bird is by no means uncommon. In my garden, as I have said, several pairs breed every year always in the holes of an old wall, and at some depth within the stones. Though much resembling the house-sparrow at a distance, it is easily distinguished, both by its different note and by its smaller size. The crown of the head and back of the neck is of a rather bright chestnut brown; the throat is black, cheeks white, a black spot behind the eye; the breast and lower parts dingy white; the upper parts a rich red brown; the middle of each feather of a darker colour; the tail is of a red brown, though not bright; quill feathers nearly black, edged with brown; bill black; feet

light brown ; on the wings are two white bands. The plumage of the female differs but little from that of the male ; the black is less strongly marked, but otherwise there is far less difference between the sexes than there is in most other small birds. Though tolerably common near Elgin, it is nowhere abundant, and has scarcely been observed as a resident in this district except by myself. Let me notice one fact, though it may be the effect merely of chance ; I have frequently picked up a dead tree-sparrow with no visible wound. Considering how seldom other small birds, which are far more numerous, are found lying dead without some ostensible cause, it may seem that this bird is of a delicate nature, or subject to some fatal disease.

May 29 (1852).—Birds in the garden very numerous for a spot of ground so near the town—1. Wood-pigeon ; 2. Cuckoo ; 3. Missel Thrush ; 4. Thrush ; 5. Blackbird ; 6. Robin ; 7. Wren ; 8. Willow Wren ; 9. Whitethroat ; 10. Hedge Sparrow ; 11. Longtailed Tomtit ; 12. Little Blue Tomtit ; 13. Sparrow ; 14. Tree-Sparrow ; 15. Greenfinch ; 16. Chaffinch ; 17. Yellow Hammer ; 18. Spotted Flycatcher ; besides constant visitors, such as 19. Hooded Crow ; 20. Jackdaw ; 21. Siskin ; 22. Sparrow Hawk, and other Hawks ; 23. Larger Titmouse ; 24. Cole Titmouse, etc., etc. Sixteen varieties breed constantly, besides the swallows, martins, swifts, about the house. There is scarcely a day now on which we could not procure specimens of each of these birds within twenty yards of the house ; and, as I said, the eggs of sixteen of them within the garden. I might also mention golden-crested wren, bullfinch, etc., which are frequently in the garden.

The whitethroat (*Sylvia curruca*) comes to us early in May. Though difficult to see, its presence is soon known by its cheerful song, which it utters while gliding quickly through a hedge or thicket ; and, indeed, sometimes it jerks itself with a peculiar motion into the air singing while on wing. The upper parts of the whitethroat are of a brown colour, inclining to ash ; the lower parts quite white. It is a slenderly-made bird ; the nest

is very slight, and made of dry grass, thin fibres, etc., generally placed in the centre of a low hedge or thicket ; the eggs are greenish white, spotted with pale brown and ash colour.

The shoveller (*Spatula clypeata*) is a small but very handsomely-marked duck. Its principal place of resort in this county is the loch of Spynie, where several pairs breed, and they frequent it during the whole winter. The nest is similar to that of the common wild duck, and is placed in the coarse grass which covers the marshy parts of the loch. When on wing, the female resembles the common duck so much that she is distinguished only by her broad bill, if near enough to see this, and by her tail being of a lighter colour. Her flight also is more rapid. To a common observer, or to one not well acquainted with wild-fowl, these distinctions would be scarcely perceptible at even a small distance. The male is more easily distinguished from his general colour being lighter, and also from having light blue marks on the wings. The bill is very curious, both in its outward shape, from which the bird derives its name, and also in the interior, which is furnished with a very deep sieve-like row of teeth, useful to it in its manner of feeding in the mud. The head and throat are of a dark glossy green. The breast white. The lower part and sides of a chestnut brown. The wing coverts of a pale sky-blue, giving the bird a very peculiar appearance. The irides are yellow, and the feet and legs orange red. The female is very like a common wild-duck, as are the young when first hatched. The latter shewing the broad bill very slightly, if at all.

The tufted duck (*Fuligula cristata*) is rare, but I have occasionally killed it in this county. It is a small round-made bird. The upper parts are all black, or of a brown approaching to black. The lower part of breast white. The head is short, and with a considerable crest, which hangs to the length of nearly two inches. Irises dark yellow ; a white bar on the wing. Bill, legs, and feet of a dark lead colour. It is a lively active bird in the water, and a very expert diver. The tufted duck is wholly a winter visitor.

The badgers in this country are seldom destroyed : at least, there is one large tract of very wild country, the soil of which is sandy and suitable for their digging propensities, where also they are not often trapped. The badger, when once he has been frightened by, or has escaped from a trap, is not easily caught again ; but displays a cunning and perseverance in eluding all attempts at his capture which he is not generally supposed to possess.

I seldom declare war against these animals, not considering them very mischievous ; but some time ago, wanting one for a friend, I set a strong trap with bait near one of their holes. A large badger got in, but managed to escape before I came to the trap. I set it again ; and the next morning, on going to it, I saw from a distance a number of hooded crows, perched in a tree near the place, in a state of great excitement. On coming up, however, instead of the badger I found an immense gray cat, closely resembling a wild cat, both in colour and ferocity, and who flew straight at me on my approaching her. Having killed her, I left her near the place, covered over with sand. The badgers came and scratched her up, and nearly devoured her by the next morning ; so I put traps about the remains of her body ; but they managed to spring every trap without being caught, and for several days they escaped in the same way. The traps were always sprung ; the badger's tracks were all round them, and the baits invariably taken away. At last, determined not to be beat, I baited my trap with an apple, as something new and unexpected to them, and immediately caught what I wanted, a fine old badger. .

My old keeper was sitting on a hillock about three o'clock one morning in the beginning of May, watching quietly a few wild-geese, which he had discovered feeding in a field not very far off, but out of shot. In this hillock was a badger's hole. Presently he heard a grunt behind him, which he took for a pig ; and looking round he saw, standing in a clover field close to him, an immensely large badger, whose object seemed to be to

get into a hole on the hillock, to reach which he had no alternative but to pass within a yard of the man's legs. After they had looked at each other for some time in this way, the badger at last uttering a most ill-natured kind of grunt, suddenly put his nose to the ground, and passing close to the keeper made a rush to the hole, with all his hair standing straight on end, and shewing his teeth in so determined a manner, as completely to take away all presence of mind from the old fellow ; so much so, indeed, that he neither shot at him nor obstructed his free entrance to the hole in any way. He tells me that when he has been sitting quietly watching for geese, otters, etc., he has not unfrequently seen the badgers going about together in companies of three or four. I frequently see badgers in the great wood at Pluscardine towards evening. My terrier got into a hole where there were some young badgers ; but the old ones attacked him and licked him completely ; he had a very fine curl on his tail, but now it hangs down in the most dejected manner, having been bitten nearly through.

May 28 (1850).—The loch (Spynie) is full of sedge warblers now. I heard a most extraordinary singing in some alders to-day ; at one time it was like a person whistling, at another like a very sweet and full toned blackbird, but always ending in a song like a sedge warbler. After watching it some time, we shot the bird, which turned out to be a whinchat. I cannot understand its note, quite unlike any bird that I ever heard.

The whinchat (*Pratincola rubetra*), though scattered widely during the summer, is nowhere abundant. On most stony and rough places in the district a pair is to be seen. But their arrival and departure seem more irregular than those of most similar birds. Indeed, I occasionally see the whinchat here during the winter. It has rather a pleasant though not a varied song, which it utters while perched on the top of a furze bush or other like situation. It is smaller than the wheatear, and rather larger than the stonechat. The head of the whinchat is black, rather thickly streaked with rusty brown.

A white conspicuous stripe runs over the eye. The chin also is white. The lower parts are rust colour, shading off into pale buff on the belly. The upper parts are variegated with brown and rust colour. The tail is white at the base, and of a dingy black on the rest of the feathers. The two middle feathers of the tail, however, have no white. Legs and feet black. The colours of the female are altogether paler and less bright than those of the male. The nest is made of dried grass, placed under a furze bush or other well-concealed situation. The eggs are pale blue, slightly spotted.

The stonechat (*Pratincola rubicola*) is a smaller and shorter bird than the whinchat. Its head and throat are black, the feathers faintly edged with brown. On the side of the neck is a white patch. The upper parts of the bird are black. The breast deep red brown, ending in yellowish white towards the belly. Tail black, bill and legs black. The female is paler and of a duller colour altogether. The stonechat is very common, and seems to remain during the whole winter. It is seen in nearly every clump of furze bush higher than the rest. Its nest is difficult to find, being generally placed under a furze bush and much concealed. The eggs are bluish, slightly freckled.

No bird is more interesting than the sedge warbler (*Calamodyta phragmitis*). I do not hear it singing till the 15th or 16th of May ; but about that time it commences, and for six or seven weeks scarcely seems to leave off its song night or day. In almost every clump of alders or willows, or in the long reeds of the lochs, the little sedge warbler sings through the whole night. Its common note, though not loud, is rich and sweet, and it seems to have a peculiar faculty of imitating other birds ; indeed it is commonly called the "mocking bird." For some minutes it repeats its own peculiar song, then suddenly breaks off into some strange flourish, apparently imitating some bird which it has heard. I one evening heard a bird singing whose voice was quite new to me, and resembled more than any other the rich full note of the blackbird. Though I knew the spot it was in

to be frequented by a sedge warbler, it was some time before I could convince myself that the tiny bird which I saw swelling out its throat and singing with all its might was the utterer of so loud and rich a song. After some watching, however, I found that this was the case. From its singing during the night, this bird supplies the place of the nightingale with us. The sedge warbler is a short-looking bird, the tail not being so long in proportion as that of other warblers. The upper parts are olive brown, slightly spotted with darker brown. There is a conspicuous white streak from the base of the bill, passing above the eye. The lower parts are whitish, feet light or yellowish brown. Its nest is built in the long grass or amongst the sedges, and is very difficult to find. The eggs are dingy white, mottled with light brown.

I have seen the Wryneck (*Yunx torquilla*) in the woods of Dulsie. It, however, can scarcely be classed amongst the birds of this district. It may be distinguished by its peculiarly beautiful plumage of brownish colour above, striped and spotted all over with various shades of the same colour and white. Its lower parts are pale ash colour or dingy white, marked with spots of a triangular shape. The tongue is very long and hard at the point. It projects it beyond the mouth considerably in catching its prey, which consists of insects. The toes are long, and placed two before and two behind. Its actions are similar to those of woodpeckers, running up and down the stems of old trees in search of insects. I never heard of its being seen on any other occasion in this country. The eggs are white. It places them in holes and crevices of trees, with no nest excepting the soft fragments of rotten wood found in such situations.

The creeper (*Certhia familiaris*) is very common in all the large woods, and this beautiful little bird may be constantly seen running up the stems of the trees in a circular or corkscrew kind of direction, beginning near the ground, running up and round the tree, then flying off to another tree which it searches for food in the same manner. I have seen it sometimes detach, and

drop to the ground, a piece of bark as large as a person's hand. In the winter the creepers accompany the large flocks of titmice and golden-crested wrens in their peregrinations through the woods, the latter searching the branches and twigs for insects, while the former search the stems of trees. It is a very small bird, not heavier than a wren. The upper parts are brown mingled with a yellowish shade, and a great part of the feathers have a round white spot in the centre; the lower parts of a satin or silvery white. The tail is long, curved, and forked, and very stiff and pointed at the end; it assists the bird much while holding on to a perpendicular trunk searching for insects. The bill is rather long and curved. The feet are slender and long, but the claws are much hooked and very hard. In the breeding season it frequently becomes very familiar, and builds in some convenient hole or crevice in an outhouse, sometimes in a hollow tree. The nest is rather loosely made of different materials, hay, straw, and fibres, and lined with feathers, etc. The eggs are white, with a few pale spots.

One day we went for dunlins' eggs, and in less than an hour took nineteen, thirteen red-shanks, and a lot of peewits; one red-shank's nest had five eggs, they were very finely spotted. The dunlins were very numerous, I believe that we might have taken any number we liked.

The dunlin (*Tringa alpina*) breeds both in rough pastures near the sea-coast, and also about most of the inland swamps, lakes, etc. During the breeding season it utters a peculiar purring noise, from which it derives the name of "purre;" and, indeed, some authors consider the dunlin and purre different birds, instead of being the same bird in different plumage. In the breeding season the crown of the head is nearly black. The upper part of the plumage is of a reddish brown, each feather having a black or dark stripe down the middle. The under parts, except the throat, which is white, are of the same rufous shade slightly spotted, and with a band of black, more or less distinct, on the belly or lower part of the breast. The bill is black and

slender, the legs and feet dark brown. In the winter the upper parts are of a brown ash colour, with a spotted appearance from the centre of the feathers being darker than the edges. The lower parts are white, more or less freckled and spotted, but they vary much at different stages of their change of plumage. They frequently collect in large flocks both in the marshes and on the coast, and are not very shy. They wheel to and fro in close bands, at one moment shewing all their brown backs, at the next all their white breasts. They utter a shrill cry on first rising from the ground. The nest is placed in a tuft of grass tolerably well concealed. The eggs are of a pale olive colour prettily blotched and spotted with brown, and have a finely polished and delicate shell. They breed later than the peewits, red-shanks, etc. I do not find their eggs till the second week in May. Several pairs frequently breed in the same part of a swamp.

May 28 (1852).—To-day we found the shoveller's nest, eleven eggs, in a very wet grassy place; the bottom of the nest quite wet—not a great deal of down—what down there was, was very black. The eggs are long and oval, darker than the widgeon, but not unlike the colour, slightly tinged with green; we have put nine of the eggs under a hen.

May 31 (1853).—We took the four young peregrines out of the rock at Covesea. They were about the right size for taking. The place was full of the remains of pigeons, peewits, ring-dotrel, and red-shanks.



CHAPTER THE SEVENTH.

JUNE.

IN June the trout begin to feed more freely, and from most Highland streams the sportsman may reckon on a good basketful if the day is tolerable. There is a kind of trout in the Findhorn which frequent only the lower pools near the sea ; higher up I never saw them ; the fishermen call them "brown lugs." In appearance they are between a sea and a river trout : they seldom exceed a pound and a half in weight.

One day about the 1st of June, when fishing in a clear pool near the mouth of the river, a large trout came out from under the bank, and darted over my fly without taking it. I changed the fly, and he did the same thing. I tried him with a dozen different sorts, and he invariably played the same trick, coming out from under the bank, dashing at the fly, then turning short round or rolling over it. At last a miniature black midge in my book caught my eye, and I put it on ; the moment I cast this fly over the trout he came straight at it in quite a different manner, taking it well into his wide mouth as if at last in earnest. He was well hooked, and then came the tug of war and the trial of patience. The fly was literally speaking a midge, made more as an experiment in fly-making than for any expected use, and it was tied on the finest gut. The trout, on finding that instead of catching a fly he was caught himself, immediately began to try every device that a trout ever imagined to get rid of his tiny enemy. Now he was down at the bottom rubbing his nose on the gravel ; the next moment flying straight up into the air with the agility of a harlequin ; sometimes with forty yards of line out, and sometimes right under my feet ; then away he went as

if about to run over the shallow at the end of the pool on his way to the sea, but changing his mind, darted like an arrow up to the deepest part of the pool, and there he lay like a stone at the bottom. After a little waiting I pelted him out of that mood, and beginning myself to grow eager and desperate (moreover, having now more confidence in my midge, which had already passed through a trial that a larger hook might not have stood equally well), I turned his head down the stream, and began to take the game into my own hands a little more—in fact to be the active instead of the passive agent. The trout, too, began to feel weary of the contest, and to allow himself to be led about : at last I brought him to the edge, but just as the landing-net was being delicately slipped under him, away he went again, and ran the line round a broken piece of bank on the opposite side. I am afraid something very like an imprecation escaped me ; and if it did, I am confident that Job himself could not blame me. Just as I had quite given all up, the trout most carefully and good-naturedly turned back the way he went, undoing the line again as neatly as possible. After a little more running to and fro he gave in, and this time we got him fairly into the landing-net, when I found that he was one of the aforesaid “brown lugs,” weighing nearly 5lbs.—the largest trout that I ever killed on the Findhorn, and mastered, too, with a fly only fit for par of the smallest size.

I have frequently found that when a large trout runs in that undecided manner at my fly, he will go in right earnest at a much smaller one. Salmon are more uncertain ; it has happened to me that, even in clear water, a salmon has leaped over or refused a small salmon-fly, but has taken greedily a very large-sized one. But this is an exception ; and my experience would lead me, as a general rule, always to offer a fish a smaller fly than the one he rises shyly at ; and I believe that I should be borne out in this opinion by more experienced anglers than myself.

June 2 (1847).—I never saw so many black-headed gulls

collected together as on the Loch of Belivat, on the property of Lethen : at one end of the loch there are a great many rushes and water-plants ; these are, literally speaking, FULL of nests, formed of interwoven rushes, weeds, etc. ; and on the islands in the lake you can scarcely land without putting your foot on eggs, which are very slightly protected by anything in the shape of a nest. On this island are a few stunted and bent willows ; every branch and every fork of a branch where a nest can possibly be placed is occupied : this is the only instance I ever met with of gulls building on bushes. The stench on the island is so strong that I hurried off again as quickly as possible : the day was hot, and it actually seemed pestilential. The old birds looked like a shower of drifting snow over our heads, and were as noisy as a dozen village schools broken loose. There were numbers of young gulls recently hatched—curiously marked little tortoiseshell-coloured things, who tottered about the rushes without the least fear of us. All other birds seemed to be kept away from the lake by the gulls, excepting a few mallards, who were swimming about in a state of bachelorhood, their wives and families being probably in some more quiet and solitary pools in the neighbouring peat mosses. When the mallards rose they were so completely puzzled and “*bebothered*” by the thousands of gulls who were darting and screaming about them, that they gave up attempting to fly away, and came plump down again into the water.

Although the gulls may know each its own nest, it is difficult to understand how they can recognise their young ones amongst the thousands of little downy things which towards the end of the hatching season are floating about upon the water. There is another nesting-place of the black-headed gulls in the forest of Darnaway, where they have taken possession of a small loch surrounded by trees. They usually, however, like all other water-fowl, prefer establishing their breeding-place on a loch situated in the open country, where they can have a good view all around, so as to descry the approach of any enemy ; but undis-

turbed possession and quiet have induced them to remain on the Darnaway loch, although it is shut in by trees.*

No gull varies more than the laughing or black-headed gull (*Larus ridibundus*) at different seasons and ages. In the breeding season, the head and upper part of the throat is black, inclining to a brown tinge. The irides hazel, the eyelids bright red. The bill is dark red. The upper part of back and wings pale gray blue. The rest of the plumage is white. The quills are tipped with black. The legs and feet are dark red. In the winter they lose the black on the head, which becomes white, with a few grayish spots. As spring advances the black colour gradually returns, but this colour varies much in different specimens from brown to black. There is no more elegantly-shaped gull than this; it has a peculiarly neat and elegant appearance. The young are of the same mottled brown plumage as most other young gulls. These gulls breed in great numbers on several rushy lochs of this country, such as Spynie, etc. etc. They congregate in immense numbers for this purpose, building a tolerably large nest amongst the rushes. The nest itself is composed of rushes and dead grass, etc. They lay three eggs of an olive brown, spotted with dark brown. The eggs vary much in colour, some being nearly green, others dark brown. Like other sea gulls, these birds vary much in size and plumage. The general length is about seventeen inches. They feed principally inland, following the ploughman, and picking up the worms and grubs which he turns up with the plough. I have sometimes seen them hawking over the long grass, and about tall trees, during the summer evenings, in pursuit of large moths, which they appear to catch with great ease. I have also killed this kind of gull with its crop full of the new sown wheat and oats which they find on the fields. The eggs are very good eating, as indeed are those of all gulls and water-fowl.

* This curious forest tarn is called the Pictarnies' loch, from its inhabitants the "Pictarny," "Pickitarr," or black-headed gull.—C. I.

June 5 (1852).—Went to-day to take the young peregrines on the rocks near Hopeman. By letting a boy over with a rope we took four young birds nearly as large as the old one, but covered with white down ; after coming home we fed them on a rabbit.

June 7 (1847).—Went to Lochlee to put in a few lines baited with small trout. The people here say there are no fish in the loch ; but as otters are often seen there, I fancy there must be some kind of fish.

June 8th.—I found on my line some very large eels of 4 and 3½ lbs. weight. Although I frequently afterwards put in the line, I never caught any fish excepting eels, but of these a vast number. This proves how favourite a food of the otter eels must be, as these animals appear to live constantly at the loch, where they could have found nothing else to prey upon. A high-land loch without trout is a rare thing, as they are almost invariably well stocked with them. We found a teal's nest with eight eggs in a small tuft of heather standing up like an island just large enough to hold the nest, in the midst of a wet place ; the heather was high, and the nest and eggs were entirely concealed. If a dog had not frightened the bird off we should never have discovered it. Nothing could be more neat and warm than the nest, carefully lined as it was with beautiful down, and arched over with heather and long grass.

June 10 (1848).—[Mr. St. John had again revisited Sutherland.]—To-day I was at the breeding-places of the waders in Loch Naver, near Aultnaharrow, Sutherland, and saw great numbers of green-shank, red-shank, curlew, snipe, etc. etc., amongst them several widgeon. The drake widgeon is peculiarly handsome in his summer plumage ; the blackthroated diver (or rain goose as the Highlanders call it) was not on the lake ; but the birds which were most interesting (and to me new) were two red-necked phalaropes, which I watched for half an hour while they fed, sometimes within a yard of my feet where I was sitting, close to a corner of the swamp. I never saw pret-

tier birds, or birds with prettier movements; *pretty* is the appropriate word. They were swimming about in the weedy water, and sometimes running on the broader leaves, feeding on the small insects and shells. Most of these birds appear to have hatched. I saw two golden eagles together to-day, and very nearly got shots at them, they were so intent on their pursuit. There are two nests with young eagles within view of the inn (Tongue) here, but quite inaccessible. I was unable to get up to the ptarmigan ground, as there has been constant mist on the mountains, which makes it impossible to reach the place where the birds breed.

June 11 (1848).—On our road to Tongue I stopped for an hour or two about Loch Laighal. Ben Laighal is a fine and picturesque mountain. Towards the loch the mountain slopes down covered with bright green herbage; but to the north and west nothing can surpass the savage grandeur of its rocky precipices. Our attention was attracted by the cries of the peregrine falcon, and we saw the two birds flying about a high rock. Having hailed a shepherd's boy, we learned where the nest was, and under his guidance climbed up the mountain—and a good steep climb it was—till we got within a few yards of the nest; so near, indeed, did we reach, that with two joints of my fishing-rod I could just touch the young birds, who were sitting eyeing us boldly and fearlessly on a ledge of rock where the nest was placed. When, however, we attempted to push them out of the nest, they retired farther in, where they were in tolerable security. All the time we were there the old birds flew screaming over our heads. I did not think of a plan that is adopted sometimes to capture young peregrine falcons when the nest cannot be reached without danger. It is very simple, and succeeds with all the courageous kinds of hawks. A person having reached the top of the rock immediately above the nest, ties a rough blue bonnet, or some similar substance, to a bundle of heather the size of a man's head; then dropping this attached to a rope upon the nest, the young falcons, instead of being

frightened, immediately attack it, and, sticking their talons into the cap, hold on courageously and determinedly till they are dragged up to the top of the cliff. Even then it is sometimes necessary to cut the cap to pieces before they will relinquish their hold. In this way the young birds are captured, without risk to the capturer or injury to themselves. On the present occasion I was not very anxious to get them, as they would probably only have been destroyed in travelling.

June 12 (1848).—We reached Rhiconnich, a tolerable inn, but certainly not so well kept as many others in Sutherland, at eleven o'clock, and immediately started for a lake some two or three miles off, where the osprey was said to build. The way to it was far too rocky and steep to take the boat, so we only took my swimming belt, as Dunbar offered to swim out to the nest, if not too far from the shore. We had a very rough walk of the longest two miles that I ever travelled. Our route was over a continuous range of rocky ground, so broken that we seldom found a flat place to put our feet on. We did not find the right lake immediately, but at last saw from a height a larger piece of water than any we had hitherto passed, and at some two hundred yards from the shore there was the conical-shaped rock, which the osprey seems always to choose for her nesting place.

On examining the rock with the glass we immediately saw the nest, and the white head of the bird in the middle of it. Our troubles were instantly forgotten, and although rather fagged before, we made our way over the rocks with new-found vigour. The unwillingness of the old bird to leave the nest shewed that she had young ones. While Dunbar prepared to take the water, I went round to watch for a shot at the old bird. I presently saw nothing but my fellow-traveller's head, as he swam gallantly out to the rock: the old osprey flew in wide circles round and round, at a considerable height, screaming loudly at the unexpected intrusion on her domain; sometimes she swooped half-way down to the water, but still cautiously

keeping at a safe distance. Before many minutes had elapsed we saw the male bird sailing high in the air, straight to the loch ; on hearing the cries of his mate he seemed to quicken his flight, and soon joined her, carrying a trout in his talons. The two birds then sailed round and round the loch with loud cries. When they saw Dunbar perched on their hitherto unasailed rock, where he stood like a statue on a pedestal, their excitement became greater and greater ; the male dropped his trout, and they both dashed wildly to and fro, sometimes at a great height, and sometimes taking a rapid circuit of the lake, within half a gunshot of the water. The next thing I saw was my adventurous companion striking out for the shore with his cap in his teeth. In the nest he found a half-grown young bird and an unhatched egg, both of which he brought safely to land. He remained on the bank to try to shoot one of the old birds, while I fished for an hour down a stream that ran from the loch towards the inn. I think it was the most rugged and rocky that I ever threw a fly on, but though it was difficult to imagine where trout could lie in it, I managed to half fill my basket with very nice-looking fish.

After resting for an hour or so, we again left the inn to look for another osprey's nest in the opposite direction. We could get but very vague information as to the exact point of the compass we had to make for ; one person telling us that the lake was only a mile and a bit off ; another that it was two miles and a bit, and so on. However, it was only about half-past five, and, with the long summer's evening before us, we cared little how far off the lake was, as long as we could find it at all. There were a few scattered houses along the banks of the sea loch at the end of which Rhiconnich is situated, and we made sundry inquiries at these respecting the lake, but got such very different answers from each person, that we were almost giving it up in despair ; I should not say that *we* "inquired," as the whole talking was in Gaelic, and therefore carried on by Dunbar. At last we met with an old woman, who told him that there was

a loch some two miles off, which had always gone by the name of the Loch of the Fishing Eagle ; her Gaelic name for it being " Loch n' iulair-iasgair ; Dunbar interpreted it to me as meaning literally, the " Loch of the Eagle-fisher."

This revived our spirits, and we set our shoulders to the hill again with fresh confidence, and a steep, rough hill it was. We struck into the country in a north-west direction, keeping separate heights, in order to have a better chance of finding the lake. Having passed several lochs without observing the object of our search, I began almost to despair, and to think that we must have mistaken the whole matter—the more so, as from the aspect of the rocks and the feeling of the air from the north, I was confident that the ocean must be at no great distance from us ; and, indeed, that it must be washing the other side of the very next range of rocks to that on which we were. There is a certain look and feeling of the atmosphere when approaching the sea which is quite unmistakeable. We had already walked an hour and a half straight north-west, thus making the two miles into at least five, when we came within view of a larger loch, which seemed to wind round the hills to nearly where the sea was. In this we again descried the peculiar shaped rock on which the osprey builds. Although we were too far off to distinguish either nest or bird, we at once, without hesitation, made for the loch, over the rocks and swamps of which the whole line of country seemed to consist, and our perseverance was rewarded by presently making out the nest, one osprey upon it, and the other soaring above her.

Dunbar again swam off to the rock, which was about the same distance from the shore as the last one, and found three young birds in the nest, which he brought to land in his cap. I saw the male osprey perch on a rock on the opposite side of the loch, where he sat lazily, and apparently not inclined to join the female in her rapid flight round Dunbar's head ; on looking at him attentively, through the glass, I saw, or fancied that I saw, his crop much distended with food. Knowing that

if this was the case he would probably remain on his perch for some time, I started off round the loch, taking a long circuit in order to approach him from behind and from above. I had not calculated on the rocks I had to climb and the passes I had to take to get at him, or I do not think that I should have undertaken the task. I had frequently to lift my dog up the steep rocks over which I had to climb. At last I came to a point from which I could get a look at the bird, and with as much care as if he had been a stag, I crept to a convenient place, and looking over, saw him still perched on the pinnacle of a rock, but quite out of reach. I found that I must still make another long circuit, or that I could not get unperceived within reach of him.

This time, on looking carefully over, I saw that he must be within shot of me, but the place I was perched on was so high and steep that it almost made me giddy to look down from it. I was completely out of breath, too; so, lying down on my back, I waited a minute or two, and then scrambled down to within forty yards of the bird, and immediately above him. As my gun was loaded with a cartridge, I knew that he could scarcely escape; so standing up, I took a good look at him, expecting that he would see me and fly off the stone, and intending to shoot him flying. Whether from the earnestness with which he was watching the movements of Dunbar, who was far below him, or from the manner in which his head-feathers projected, he did not appear to see me at all. After waiting a short time without his moving, I am sorry to say that I shot him deliberately in cold blood as he sat. He fell down the face of the rock, and lay at the bottom perfectly dead. I then had to consider how to get him, and Fred (my terrier) seemed to be considering the same thing, as peering over the edge of the precipice he looked first at the dead bird and then at me, with a countenance expressive of—"There is your bird now, but how are we to get at him?" This question, however, was soon settled by my marking the place, and then having made a considerable détour,

I managed to reach the spot. In the meantime, Dunbar having fired both barrels at the hen bird, she took her flight straight off to the sea. After a short time she returned, but kept at a wary distance, occasionally perching on the rocks, but never remaining long in one place. It was a curious sight from the high rocks several hundred yards above the loch to watch the whole scene that was acting below, and to see the long-winged bird sailing to and fro almost immediately below my feet, and yet far out of reach of shot.

Two miles from Scourie, on the Rhiconnich road or near it, is a loch where the ospreys build, and where, in May, I shot the old hen, taking at the same time two eggs. Mr. Dunbar, with his usual perseverance, went to this nest immediately on our return from Handa, and found that the male bird had got another mate, and that she was already busily employed in sitting on a single egg.

It is very difficult to describe correctly the eggs of many birds: for instance, the two eggs which I took from this nest were beautifully marked with fine rich red spots, while the egg now taken by Dunbar was of a dirty white colour, marked at one end only by a splash of brown, and was also smaller than the others. In another nest, again, the eggs were considerably larger than either of these, and differently marked both as to colour and shape of spots. In the same manner one reads the description of the size of birds as being measured to inches and sixteenths of an inch, but the authors forget or are not aware of the constant difference in size of birds of the same species.

We also examined the nest that we had seen in May last near the ferry of Glendha, or Kyleska, as it is also called. On looking at it with a glass, we saw one old bird sitting, not *standing*, on the nest, and yet on Dunbar's swimming out to it he found no egg in the nest, which was exactly in the same state as when we left it three or four weeks ago: both birds, too, continued sailing and screaming over our heads as if they had eggs or young ones to defend. This nest, like the last three that

we had seen, was built on the same kind of conical rock, standing out of the waters of the lake ; indeed on all the lakes where this singularly shaped rock was to be seen, there also was the osprey's nest, and there it had apparently been for many a long year, as was clearly shewn by one of the lochs being known by the old people only under the name of the loch of the "Eagle Fisher." The ospreys on their arrival in this country seem to seek out such rocks in the wild solitudes, and on these and these alone do they build. Trusting to their isolated and lonely situation for safety, these interesting birds hold undisputed sway over their watery kingdom.

June is generally the best month in the year for angling in Scotland : the loch trout are by this time in good condition, and rise freely at the fly. The grilse also are now in most of the rivers, and afford better angling than any other fish, rising well, and being strong and active when hooked. There appears of late years to be a great diminishing in the number of salmon in all the Scotch rivers : the fish are more protected from the angler, but are caught and destroyed in so many other ways—by constant netting in the streams, by innumerable stake-nets, bag-nets, etc., all along the coasts—that they have but little chance of keeping up their numbers. From one end of Scotland to the other along the whole extent of the coast, these destructive nets are fixed at every convenient place. Near the mouth of every stream, large or small, they are to be seen, and immense must be the number of fish taken to repay the expense of keeping them up, and renewing the stakes, netting, etc., every spring, and frequently also after severe storms. Near the little stream of Nairn there are no less than three of these nets, and as many more between that point and the Findhorn, all of which are exposed to a heavy sea, which must make the expense of keeping them in repair very great.*

* For information on the Salmon Fisheries, see Quarterly Review, January 1857, and April 1863 ; Edinburgh Review, April 1851 ; and Blackwood's Magazine, January 1861.—ED.

June 13 (1853).—The wood-pigeon in the garden has eggs in the same nest in which she brought up young ones a few days ago. A woman brought to me yesterday a live roe; she calls it three weeks old, but it does not appear quite so old as she says; it drinks milk very readily.

June 15 (1853).—I found a woodcock's nest with four eggs. The old bird flew off, and fluttered along the ground to take off our attention; the nest was made of moss, small sticks, etc., and placed under some cut branches.

On the Bar, which is a kind of island [at the mouth of the Findhorn], there is a solitary hut, where two or three fishermen pass the spring and summer. In the latter end of winter, when I have been wild-fowl shooting in that direction, I have often gone in there to screen myself from the cold. During the absence of the fishermen the hut is tenanted by rabbits, who make themselves quite at home, digging holes in the turf walls, etc. The life of the fishermen in this place must be like that of a lighthouse-keeper. During high tides they are quite cut off from the mainland, and although at low water their place of abode is no longer an island, yet that part of the shore opposite the bar is a kind of wilderness little frequented by any one, being at a long distance from any road or path, with an extensive tract of rough and all but impassable country stretching in every direction. It is, however, a favourite resort of mine, being the undisturbed abode of many wild animals. The roebuck and blackcock live in tolerable security there, and would increase to a very great extent were their young ones not killed by foxes and other vermin, who prowl about without danger of trap or poison.*

June 15 (1847).—In the stagnant pools near the river Nairn there are great numbers of that singular worm called by the country people the hair-worm, from its exact resemblance to a

* This is the range of moor and stunted wood separating the estates of Dalvey and Brodie from the sea, which St. John elsewhere calls his "Black Forest."—C. I.

horsehair. In these pools there are thousands of them, twisting and turning about like living hairs. The most singular thing regarding them is, that if they are put for weeks in a drawer or elsewhere, till they become dry and brittle, and to all appearance perfectly dead and shrivelled up, yet on being put into water they gradually come to life again, and are as pliable and active as ever. The country people are firmly of opinion that they are nothing but actual horsehair turned into living things by being immersed for a long time in water of a certain quality. All water does not produce them alike. To the naked eye both extremities are quite the same in appearance.*

While fishing in the river one day at the beginning of June, my attention was attracted by a terrier I had with me, who was busily employed in turning up the stones near the water's edge, evidently in search of some sort of food. On examining into his proceedings I found that under most of the stones were a number of very small eels: where the ground was quite dry the little fish were dead, and these the dog ate; where there was still any moisture left under the stone they were alive, and wriggled away rapidly towards the stream, seeming to know instinctively which way to go for safety. Trout have undoubtedly the same instinct; and when they drop off the hook on the bank by chance, they always wriggle *towards* the water, and never *away* from it. It is difficult, indeed almost impossible, to become much acquainted with the habits of fish; but could we pry into their domestic circles, I have no doubt that we should find them possessed of a far higher degree of instinct and much greater cleverness in providing for their food and safety than we give them credit for. The instinct of fish in foretelling, or rather in foreknowing, the changes of weather is very remarkable; and the observant angler may almost prophesy with regard to the

* The popular belief throughout Scotland is, that a stallion's tail hair thrown into running water suffers a change into those animalculæ. The popular mind takes no account of the theories or principles of philosophers.—C. I.

approach of rain or storms by seeing in what mood for rising at his flies the trout may be. In certain states of the weather the angler may put away his tackle without trying to take a single trout; but this can only be learned by experience and close observation.

June 16 (1847).—Walked to Lochlee, found that the hooded crows had taken all the eggs from the teal's nest which I discovered here on the 8th. I had frequently seen her in her downy nest since that time, but to-day both bird and eggs were gone; and when I went to the grassy hillock, which the crows used for a dining-table, there were the remains of the whole eight eggs.

There are one or two grassy hillocks near the loch to which those mischievous robbers bring the eggs which they have pilfered in order to eat them at their leisure; and until I administered a dose of strychnia, I never passed these places without finding the fresh remains of eggs—partridges, plovers, snipes, red-shanks, wood-pigeon, ducks, and teal, all seemed to have contributed to support these ravenous birds.

Poisoning with strychnia is by far the most effectual way of destroying crows. If you put a piece of carrion in a tree well seasoned with this powerful drug, the ground below it will soon be strewn with the bodies of most of the crows in the neighbourhood, so instantaneous is their death on swallowing any of it. It seems almost immediately to paralyze them, and they fall down on the spot.

June 21 (1851).—While I was shooting rabbits near the loch of Spynie, I saw a small bird fly high over my head, I called out "a rose-coloured starling," and shot at it, bringing it down beautifully clean and scarcely injured. It was flying in company with two other starlings apparently of the ordinary colour, which escaped, so that I could not ascertain whether they were young of the same species, or common starlings. The head and neck are glossy black. Its crown feathers are elongated into a pretty long crest. The back, the rump, and the

lower parts are of a faint rose-colour. The rest of the plumage is black. The bill is of a pale reddish colour, black at the base. The legs and feet pale reddish brown. Different specimens vary in the shade of the rose-coloured parts, and in length of the crest. It is but very rarely met with in any part of Britain.

June 25 (1847).—I rowed to-day to the Old Bar, about four or five miles from here, found some eggs of tern and the lesser tern. Numbers of these birds were flying about; but the eggs are so very similar in colour to the stones amongst which they are laid, that it is not easy to find them. Going there we put out a line for flounders, and took it up on returning, catching about 50 flounders, a gurnet, and a large cod. The latter is as long and lean as an eel, and had lost one eye. The men took it to bait their crab traps with.

Sometimes on a fine June evening the sea-fish, such as gurnets and coal-fish, take a large white fly readily enough, and fight most powerfully when of any size.

June 28 (1847).—I took a boat to-day to cross over to the rocks of Cromarty, in order to shoot some rock-pigeons. The breeze was gentle, but sufficient to take us merrily over; and putting out a couple of lines with large white flies, we caught plenty of gurnet, etc. The fish darted suddenly and with true aim at the flies when close to the boat as readily as when at some distance. After coasting along the rocks for some time, and shooting a few pigeons, at the risk occasionally of having the bottom of our boat stove in by the hidden rocks, round which the large tangle floated gracefully in the passing waves, treacherously concealing the rocks from which they grew—we turned our boat's head homewards. By this time the wind had dropped entirely, and the tide running strong against us, we had to row for four hours in a heavy haddock boat to reach our destination. I had only one man and a boy with me, the latter of no use; so I took an oar myself and pulled steadily on, stopping only occasionally to haul in a gurnet or other fish.

Both goats and sheep were feeding about the rocks, and even

the latter seemed to get easily to places which appeared to be accessible only by means of wings. The small patches of bright velvety grass, which grew here and there on corners of ground formed by the débris of the cliffs, however difficult of access, were all tenanted by them.

On one bit of emerald-coloured grass, not larger than a good-sized table-cloth, a sheep and her young lamb were feeding at their ease. Although I stopped the boat and examined the place carefully, no way of access to this little bit of table-land could we discover. The well-contented animals seemed shut out by perpendicular precipices from all the rest of the world.

As for the goats, no ledge or projection of the rocks near which grew any tempting bit of herbage, seemed too small or too difficult of approach.

The hardy little blue rock-pigeon (*Columba livia*) abounds on all the sea-coast of Scotland where the rocks are steep and broken into fissures and caverns—one moment dashing into its breeding-place, and rapidly flying out the next; then, skimming the very surface of the breakers, this little bird gives animation and interest to many a desolate and rugged range of cliffs as far north as Cape Wrath and Whiten Head, and it still frequents the rocks on this coast, though in small numbers, and is so intermingled with the house-pigeon, which it so exactly resembles, that it would be difficult to decide now if any of the real wild birds still remain. In the caves on the Ross-shire coast, and all along the north, great numbers still are seen. They build in the caves and holes of the rocks close to the sea side. Their colour resembles the common blue house-pigeon; the rump is always white; the top of the tail is black, and a black bar across the wing; the feet are red. They feed on the small patches of oats grown in the Highlands, and when farther southwards, in the stubble and corn-fields; they also swallow numbers of small snail shells, which are generally numerous amongst the grassy patches on the cliffs. The nest is usually placed in the most

inaccessible and difficult recesses of the rocks, so much so, that numerous as they are, it is often very difficult to obtain the eggs. The nest is composed of whatever twigs, pieces of dried grass, etc., they can pick up in the wild places which they inhabit, and is quite the same as that of the tame pigeon.

The turtle-dove (*Columba turtur*) is quite a southern bird, and its visits to this country must be accidental and very rare. I have seen it, however, in the neighbourhood of Forres. It is considerably smaller than the rock pigeon. The prevailing colours of the plumage are ash gray and reddish brown ; on each side of the neck is a patch of black feathers, each feather being pointed with white ; the belly is white, the breast inclining to purplish brown ; the tail is dark, nearly black, and all the feathers, excepting the two centre ones, which are brown, are tipped with white. I have often seen the nest in the south of England, generally placed in a tree covered with ivy, or in some very densely foliated tree, such as a spruce fir. I never heard of its being seen in Moray, excepting on the occasion mentioned above, where I saw a pair daily for a short time. I have, however, had a bird described to me lately as having been seen near Elgin, which I am tolerably certain must be the turtle-dove.

About three weeks ago our tame pochard had been carried away in a hurricane of wind. To my surprise, one day this month I saw this same pochard swimming about the loch alone, and apparently very tame. One of the children who was with me, and whose own especial property the bird had been, whistled to it in the same way in which he had been accustomed to call it, upon which, to his unbounded joy, it immediately came towards us, and for some time continued swimming within a few yards of where we stood, evidently recognising us, and seeming glad to see us again.

A few days afterwards we again saw him ; but he was now accompanied by a flock of fourteen or fifteen others. This was remarkable, both on account of the time of year, and because this kind of duck is very rare in this region, and has never been

known to breed in the neighbourhood ; but all birds seem to have some means of calling and attracting those of the same species, in a way that we cannot understand.

My peregrine falcon, who still lives in the garden, now utters a call which is different from her usual shrill complaining cry, and which occasionally attracts down to her some wandering hawk of her own kind. The peregrine falcon is well named, for it is found in all countries.

Our bird, from good food, and having always had the run of a large garden, instead of being confined in a room or cage, has grown to a great size, and is in peculiarly fine plumage ; with the dark slate colour of her upper feathers forming a beautiful contrast to the rich cream-colour of her neck and breast.

There is scarcely any common animal too large for her to attack when she is hungry. She will fly at a dog or cat as readily as at a rabbit or a rat. The latter animal she kills with great dexterity and quickness ; and I have also found the remains of half-grown rabbits, who, having feloniously made their way into the garden, have fallen a prey to her powerful talons.

On changing my residence some weeks ago I gave a tame peregrine falcon I then had to a friend in the neighbourhood, who keeps her in a walled garden, where she soon became quite at home, and learnt to know her new master as well as she had known me. She almost startled me one day as I was walking in his garden with a bunch of dark-coloured grapes in my hand. The falcon as I passed by her mistaking the grapes for a bird or some other prey, made a sudden dash at them, and with such violence as in an instant to disperse the whole bunch on the ground, where she hopped about examining grape after grape, and, at last having found out her error, she left them in disgust.*

* A lady was gathering strawberries in the garden at Ury, when an eagle, which was kept there tame and unchained, swooped with its beak into the dish of red fruit, and its talons on the lady's arm, to her great dismay.—C. I.

It must be a strong bird that can withstand the rapid powerful swoop and fierce blow of a peregrine. I have seen one strike the head off a grouse or pigeon with one blow, which divided the neck as completely as if it had been cut off with a sharp knife.

Few birds of the same kind vary so much in size as peregrine falcons. Some killed in a wild state are almost as large as the noble ger-falcon. Altogether the peregrine is the finest of our British falcons, both in size, courage, and beauty. It possesses, too, in the highest degree, the free courage and confidence which facilitate so greatly the process of training hawks to assist us in our field sports.

The cliffs of Gordonstoun, near Covesea, are frequented by the cormorant (*Pelicanus carbo*), and though the bird does not breed on our rocky coast, yet it frequents some parts of it in great numbers. It frequents also most of the rivers and lochs for the purpose of fishing ; trout, eels, flounders, etc., are all swallowed, and a fish of 2 lbs. forms but a mouthful to the ravenous bird. The cormorant is easily trained to fish ; it is a bold, confident bird, and soon becomes familiar with its master. A small strap buckled round the neck loosely, but sufficiently tight to prevent the bird from swallowing its prey, is necessary, as it would otherwise fill itself with fish, and then hunt no more. Restrained from this by the strap the cormorant catches as many trout or fish as it can hold in its neck and throat, and this is a far greater quantity than might be supposed ; and then, if well trained, comes to land to be relieved. It immediately disgorges those already caught, and commences anew to fish. When it has caught a sufficient number, or gets tired, it ought to have its strap taken off, and to be then fed and taken home. The cormorant should not be put to fish where eels are numerous, as it manages to swallow these in spite of its strap. The elasticity of the bird's jaws and throat is so great, that it has been known to swallow and bring to land a moor-hen. It is very amusing and curious to watch a cormorant pursuing a trout in clear water. On being

turned into a pool, the bird immediately dives, and it can be seen searching under the broken banks, loose stones, etc., till it drives out a fish, when a chase takes place, so rapid that it would be difficult to know whether the cormorant was a fish or a bird, so quickly and apparently without exertion does it shoot through the water, turning the trout as a grayhound does a hare, and seldom failing to catch it. If the trout takes refuge under a stone or bank, the cormorant sometimes is at fault for a moment, but soon finds it again, and, as I said, generally ends in catching it. Altogether, fishing with a cormorant is a very amusing, though seldom practised sport. In a wild state, after having fed, the cormorants sit in rows on some favourite rock or other suitable place, with their wings spread wide open like the figure of a spread eagle. Its favourite element is, however, the water, and it swims and dives with great speed and facility. The bill is well adapted for holding a good-sized fish, being strongly hooked, and very hard at the point. The eyes, like those of the gannet, are placed very forward; they are of a pale green, small, and have a peculiarly cruel and fierce expression. The plumage is of a glossy black, with a purple and bronze-coloured gloss. In the breeding season the adult bird has a short crest. It has also a white mark under the chin, and a conspicuously white patch on each of its thighs. In winter it has not these distinctive marks. There is a considerable variety in the brightness of plumage and in the size of these birds, depending on age and season. The egg is smaller in comparison than that of many other water birds. It is oval, and of a dirty white colour, very chalky and rough on the surface. Though eaten in some places, the whole bird—both the flesh and plumage—has a most unpleasant oily smell, which it never gets rid of. The “crested cormorant” of some authors is the common cormorant in its adult and summer plumage. The feathers of the tail are peculiarly hard, stiff, and have a worn appearance, as if the bird leant on them. To shew the voracity of the cormorant, I must relate an anecdote, the truth of which may be de-

pended on. In January 1850 a cormorant was shot on the Beaulieu River by Sir Alexander Gordon Cumming of Altyre, which, when killed, was found to have swallowed a foul grilse or salmon, weighing *above* 4 lbs., and measuring 22 inches in length. The tail of the fish actually extended out of the mouth of the bird. Singular as this instance may be, the facts were noted at the time by a most accurate observer.*

June 29 (1847).—Went to-day to the Old Bar to fish for flounders; we caught a great number, and one small turbot. Found also some terns' and ring-dottrels' eggs. Shot a guillemot on the way. We caught on the lines some gurnet as well as flounders. The gurnet takes sand-eels better than any other bait. The flounders, when opened, are full of small shell-fish. The sand-eels are caught in great number in the sand-banks, which are left bare by the ebb of the spring tides. The people procure them by turning up the sand to the depth of about three inches.

* The Master of Lovat has the bird stuffed at Beaufort Castle.—
A. P. G. C.



CHAPTER THE EIGHTH.

JULY.—Part I.

ABOUT the second week of July the shore and sands are enlivened by vast flocks, or rather clouds, of dunlins, ring-dottrels, and other birds of the same kind, who now, coming down from their scattered breeding-places, collect in immense companies. When the tide ebbs, all these birds are employed in searching for the minute shell-fish and animalculæ, on which they feed; and vast indeed must be the supply required. About the lochs and swamps the young snipes and red-shanks begin to fly, and with the wild-ducks afford plenty of shooting.

The young sea-gulls, too, are numerous about the Bar and sandbanks, and are easily distinguished from the old ones by their fine mottled brown plumage.

Great numbers of all these birds must be killed by foxes, for every day I observe their fresh tracks along the shore and round the lochs. Near a fox's hole in one of the woods I saw an incredible collection of remains and *disjecta membra* of ducks, turkeys, fowls, game of every kind, and even of roe: apparently a litter of young foxes had been brought up in it.

The sanderling (*Calidris arenaria*) visits the coast of this district early in autumn, and though not numerous, may be commonly found either singly or in small companies amongst the ring-dottrel and other birds which frequent the sands. Amongst these it may be generally distinguished by its whitish plumage, and also by not being so restless and shy as many other kinds of sandpipers. The plumage of the sanderling differs according to the season. The bill is black, and the

forehead white. The upper parts of the plumage are pale gray, slightly dotted with brown and with a few irregular black spots. The wings are long, extending beyond the tail, which is dark brown. The lower parts are pure white. As I said before, the plumage of different specimens is much varied; but all are distinguished by a hoary or "mealy" appearance. The feet and legs are black, and there is no heel-toe. Altogether the sanderling is one of the prettiest birds of the kind that we have. It does not breed in this country.

The smew (*Mergellus albellus*), an elegant little bird, is a rare visitor to us. The head is white, with rather a large though not a long crest; on each cheek is a patch of greenish black. The rest of the plumage is elegantly marked with black and white, which makes the bird easy to distinguish from any others of the same kind. The bill is of a dark lead colour. The legs and feet are the same. The bill is sharply serrated, with its teeth sloping inwards. The female has the head and upper part of the neck of a reddish brown. The lower part of the body of the same colour, shaded with ash. The lower parts white. The smew frequents the mouths of rivers and ditches near the sea shore, feeding on small fish, of which it swallows great numbers. This bird, particularly the adult male, is of rare occurrence and seldom met with.

The Slavonian grebe (*Podiceps cornutus*) is also a rare visitor. I have seen and shot the bird on Lochlee, and have seen one that was killed on the Spey. I have also seen a pair on Spynie during a hard winter. The great variety of plumage shewn by the grebes at different seasons of the year, and when of different ages, makes it very difficult sometimes to speak quite decidedly on the species to which a bird belongs.

July 10 (1847).—At Lochlee the young wild-ducks are now just ready to fly.

July 11 (1847).—Went to Lochlee to take up my lines which I put in yesterday. Shot a beautiful buck close to the loch yesterday.

On the 12th of July the Nairn herring-boats are all launched to reap their uncertain harvest. Of late years the supply does not seem to be nearly so regular or so much to be depended on as formerly ; and frequently the men are but badly repaid for all their expense and risk. The cost of a herring-boat here, complete with its rigging, nets, etc., is not much less than ninety pounds ; and the wear and tear of the nets is very great, owing to bad weather and other causes : the hull alone of the boat costs about twenty-seven pounds. There are five men to each boat ; and Nairn alone sends out about sixty boats, so that from that small place not less than three hundred able-bodied men are for six or seven weeks employed in the pursuit of this valuable fish. The herrings are generally bought up beforehand by the fish-curers at Helmsdale, on the Sutherland coast, and at other parts, who contract to take the whole produce of the season's fishing at a fixed price ; so that notwithstanding the immense number caught, the supply of fresh herrings through the country is but scanty. The fish are, with as little delay as possible, packed in casks with brine, and in this state are exported to all parts of the world. The barrels are made principally of birch. Fir will not answer the purpose, as it gives a taste of turpentine to the whole contents of the barrel. I have been out in a herring-boat during the fishing ; and a very beautiful thing it is to see the nets hauled in with thousands of herrings, looking in the moonlight like so many pieces of the brightest silver flashing in the calm water. When not employed with the nets, the men generally fish with hooks for cod, halibut, etc. ; all fish caught in this manner being the perquisite of the man who catches them ; and frequently they make a good profit by this, as the cod collect in vast numbers about the herring fishing-grounds, and are caught as quickly as the hooks can be dropped into the water. Sometimes the cod, their great indistinctly-seen forms looking like the pale ghosts of fish, come close to the surface round the boats, and seize the bait as soon as it touches the water. Hauling these heavy

gentry up from the depth of several fathoms is very severe work for the hands.

The herrings seem the most persecuted of all living creatures. From the moment when the great shoals of them appear in the north and north-west, they are pursued by thousands and tens of thousands of birds and countless numbers of fishes ; and wherever the herring shoals are, *there* are these devourers. From the aristocratic salmon to the ignoble and ferocious dogfish, all follow up and prey upon the shoals ; whilst their feathered foes mark out their track by the constant screaming and plunging into the water which they keep up during their pursuit. The solan geese from mid-air dash with unerring aim on the bright and silvery fish ; whilst the cormorants and other diving sea fowl pursue the dense crowd with indefatigable eagerness. In addition to all this, sea-gulls of every kind, like the skirmishers of an army, keep up a constant pursuit of all stragglers or wounded fish which come near enough to the surface to be caught by these birds, who have neither the power of the solan goose, to pounce hawk-like on their prey, even when at some depth in the water, nor the diving power of the cormorant or guillemot, who can pursue them deep down into the sea. Altogether, a shoal of herring with its numerous accompaniments is a most amusing and interesting sight, independent of the consideration of the great importance of this fish to mankind, the number of people to whom it serves as food, and the number who are employed in its pursuit.

Besides the natives of the fishing villages, a considerable number of Highlanders from the western coasts come down to earn a few pounds during the herring season ; it is almost the only cash these poor fellows get hold of in the course of the year. Most of the boats belong to two or three proprietors each, who having in the course of many years laid by a few pounds, invest them in the purchase of a herring-boat. These men hire the services of four or five hands for the season,

the duration of which is about six weeks, and give them a certain sum, according to agreement, generally about four to six pounds per man. Unluckily, many of the families of the herring-fishers derive but little benefit from the wages earned, as too frequently the men spend all the money, or nearly all, in drinking and rioting when the fishing is over, and instead of providing for their wives and children, lounge about the whisky-shops as long as a farthing remains, never attending to the haddock or white fishing till driven again to exertion by sheer necessity. This, however, does not apply to the whole race of herring-fishers. Those men who come to the fishing on the east coasts from the Highlands generally take their money carefully home, depending on it for buying clothes, paying rent, procuring seed-potatoes, and for any purpose where ready money is required.

Just before the time when the herring-boats go out, the roads are dotted with little groups of Highlanders arriving from their mountains, each man having a small parcel of necessaries tied up in a handkerchief and carried on a stick over his shoulder. They are sadly footsore and wayworn by the time they have traversed the island from the west coast. Being little accustomed to walking anywhere but on springy heather and turf, the hard roads try them severely. Most of them are undersized and bad specimens of the Celtic race. Very little English is spoken amongst them, as not one in ten understands a word of anything but Gaelic. When they have occasion to go into a road-side shop to purchase anything, or to ask a question, a consultation is first held amongst the party, and then the most learned in Saxon is deputed to act as spokesman, for there is scarcely any Gaelic spoken along the east coasts, the fishermen in particular being almost wholly a foreign race of people, that is, not Highlanders. Some are English settlers, and some are descendants of Danes and other races who have originally been left by chance or choice on this coast. Their names are frequently Danish or Swedish. In fact they are altogether a different people from the

Celtic inhabitants of the neighbouring mountains. There is an almost regular line drawn through the country, where the Gaelic language ends and the English commences. The town of Nairn is divided by this line; one half of the inhabitants being talkers of Gaelic, and the other speaking only English. It is said that one of our prime ministers boasted to a foreigner that his master, the King of England, possessed a town so extensive that the inhabitants of one end spoke a different language from those of the other end. Nairn was the town in question; and whatever the merit of the joke may be, it corroborates what I stated.

To return, however, to our Highland fishermen. Wearily and heavily the poor fellows labour along the road, and by the time they reach Forres, Nairn, and the other towns near the shore, they are sadly knocked up, their food during the journey having been poor and scanty, consisting generally of potatoes, and perhaps oatmeal, mixed up frequently with cold water, a sorry mess for a traveller who is taking the unaccustomed exercise of tramping along a hard road. Many of these men know pretty well where and by whom they shall be hired, but others have to seek employment where they can. Their faces grow visibly shorter as soon as they are engaged; and they set to work, though possessing little seamanship, to assist in putting into order the nets, floats, stores, etc. In a few days every boat is afloat and ready. Then comes the parting-glass with their shore-staying friends, which, by the bye, is often multiplied until it amounts to a very fair allowance.

As the boats set sail from the small harbours and piers, the wives and families of the fishermen who belong to the place come down to see their relatives off; and many groups of weather-beaten women sit and watch the boats till out of sight, discussing anxiously the chances of a good or bad season, a matter of no light import to them, as their comfort during the rest of the year almost entirely depends upon it.

I have frequently known some stout boy, strong and fearless,

but too young to be allowed to accompany his father, hide amongst the nets and sails in the boats, hoping to get taken out unobserved, till they were too far out at sea to send him back. The little fellows, however, seldom succeeded, and were generally chucked unceremoniously enough out of the boat, either on to the pier whilst the boat was passing along side of it, or into some of the numerous haddock and other fishing-boats which lie at anchor in the harbour.

The herring season, although a time of hard work to the men, is for the most part a time of rest to the women. Instead of having to tramp, as they shortly hope to do, miles into the country with a weight of fish on their back which would be almost a burthen for a donkey, they have little else to do than to gossip with each other, and set lines about the harbour and shores, excepting in those places where the herrings are cured, and put into casks for foreign consumption, where they are busy enough. The boats which go out from many of our small towns seldom return home again until the season is over ; but leave the produce of their fishing at the curing stations every night if possible.

The herring fishermen have not only much hard work, but many dangers to contend with. Whilst far out at sea tending their nets during the night-time, storms of wind suddenly come on, and a scene of hurry and confusion ensues which can scarcely be imagined. Anxious to save their tackle and unwilling to lose any chance, the men in some boats are busily engaged hauling up their nets ; other boats are driving past them with everything in confusion and their sails flapping in the wind. Others, manned by more prudent and able hands, who have foreseen the coming storm, are scudding with everything snug for the nearest port, and lucky are the boats which reach it without loss of tackle or life. Frequently by waiting too long, whilst endeavouring to save their nets, the poor herring fishers are placed in the utmost danger, and are driven helplessly out to sea, where they either toss about at the mercy

of the winds and waves till the storm somewhat abates, or are swamped and lost, the men probably having been wearied out by their efforts to keep the boat's head straight to avoid shipping the broken waves which surround them. The crews too, the chief part of whom are generally landmen, or, at best, men accustomed only to the narrow waters of the west coast lochs, become disheartened and useless in the hour of need, affording little assistance to the skipper of the boat, who is probably the principal owner also, and who has the prospect before him of heavy loss or ruin. Many and many a herring boat founders in this way at sea, her crew worn out by their exertions. At other times an inshore wind dashes the boats on the iron-bound coasts off which they have been fishing, and the crews perish before the eyes of their wives and families. Instances have occurred of a crew reaching some rock within a short distance of the shore, and within hearing of those assembled on the beach, who, after having vainly attempted to afford them assistance, see the poor fellows gradually washed off one by one as their strength fails them during the rise of the tide. There are but few harbours on the east coast into which the boats can run if caught in a storm. If a heavily-laden herring boat is overtaken by rough weather, it is very difficult to get rid of the cargo quickly enough to escape being swamped. In fact, the throwing them overboard is a long operation; and sometimes when they have a lucky haul, they load until the gunwale of the boat is but a few inches above the water. In this case the shipping of a single wave is sufficient to swamp them. A cargo of large fish, such as cod or skate, may be thrown overboard with some degree of quickness—not so a cargo of herrings.

Although the months of July and August generally pass over without any very dangerous weather, September is frequently a season of sudden squalls and storms on our coasts.

This year, 1848, one of these sudden storms came on towards the end of the fishing season. It reached from the

north coast to near Sunderland, beyond which place the wind was comparatively light. The boats had gone out with a gentle breeze, nor had there been any warning of bad weather ; but before morning more than a hundred fishermen were drowned, and the loss of boats and nets was immense. Nothing could be more significant of the havoc which that storm had caused than the fact of *one* fisherman bringing to his house *fifteen* blue bonnets, the owners of which must have all perished near the same spot. Fishermen marry young and have large families, and the numbers of widows and orphans left dependent on the charity of the world in these cases are always very great.

This is the gloomy side of the picture of herring fishing ; but it has its bright one, for I do not know a more exhilarating sight than the fleets of herring-boats standing out from all the larger towns between Wick and the Firth of Forth on a fine evening during the fishing season. All along the coast, where at other times the indolent habits of the fishermen are prominently seen, everything now evinces life, energy, and activity.

Hundreds of brown-sailed boats go out from some of the harbours at once, the place resounding with the loud but good-humoured greetings and jokes, from one boat to another, as they pass with all speed of sail and oar to the herring-grounds, each eager to be the first to reach the place so as to have choice of station. A gentle breeze takes them merrily out, and their nets are cast and fixed, buoyed up by their large round floats, or by what are much used in some places, prepared dog-skins— a most unworthy fate for so noble an animal. To make these floats they cut off the head, and take the whole body out at the aperture, leaving the skin otherwise entire. It is then dressed and tarred over. The neck is stopped up by a wooden plug made to fit it, and the skin having been thus rendered water-tight is filled with air, legs and all. So that the float consists of the entire dog-skin minus his head. Blown up and extended as it is, and black with tar, it is about as ugly but as serviceable a float as can well be imagined.

The herring-nets being laid, the men, if the shoals do not appear to be on the move, set to work to fish with hook and line for cod, halibut, etc., of which they frequently catch great numbers ; earning in this way a considerable addition to their wages. Warned, however, by the cries and activity of the sea-birds, and by other well-understood signs, all at once they take up their lines, in order to attend to the main object of their fishing, and in a few minutes you see every boat hauling up the herrings which hang in the meshes of the nets, and glance like pieces of burnished silver as they break the surface of the water. Sometimes the dog-fish do great mischief, biting the herrings in two, and tearing the nets. When, however, all goes well, the nets are soon hauled in, and the fish disentangled from them as quickly as possible, and in a surprisingly short space of time all is made ready for another draught.

Sea-birds innumerable attend on the herring-boats, finding it easier to pick up the dead fish, whether whole or in pieces, which fall into the water, than to dive after the living ones. The larger gulls eat immense quantities. I was assured that a black-backed gull has been seen to swallow five goodly-sized herrings in rapid succession. He was then so utterly gorged and unable to move that he was caught. All these flocks of birds enliven the scene—some, like the gannets, dashing down from a height into the calm water, and almost invariably catching a herring ; others diving and attacking the shoals far down beneath the surface ; while the gulls for the most part feed on the maimed and broken fish. Every bird, too, seems to be trying to scream louder than the rest, and such a Babel-like mixture of sounds can scarcely be heard anywhere else. Altogether it is a most interesting and animated scene, and to see it in perfection it is well worth while to take the trouble of passing a night in a herring-boat instead of in one's bed. In fact, I can truly assert that two nights spent many years ago in herring fishing have kept an honoured place in my memory, and are looked back to as among the most amusing of my out-door adventures.

A different mode of pursuing this fish is resorted to when the shoals take to the lochs or salt-water inlets on the west coast. The scene is then one of singular interest and beauty. The fishing is carried on in what looks like a calm fresh-water lake, winding far up into the mountains, which, overhanging the water, echo back with startling distinctness every sound that is uttered on its smooth surface. The picturesque rocks of the shore, in spots richly wooded, overhanging the deep water of the bay, and the gray mountain slopes above these, add a beauty to the scene which is an unexpected and unusual accompaniment to sea-fishing. Hundreds of boats are actively employed in every direction ; whilst larger vessels lie waiting to get their cargo of fish complete, and then stand out from the bay, winding round its numerous headlands until they can take advantage of a steady wind, blowing from some one certain point, instead of from two or three at once, as mountain winds are wont to do. In addition to these vessels, which are bound for Liverpool, Dublin, London, or elsewhere, there is the Government cruiser, distinguishable at once by its symmetry and neatness, lying near the mouth of the loch, with its tall mast and long yards, keeping order amongst the thousands of men who are all rivals in the same pursuit, and all eager for the best places, or what they consider as such. When she fires her morning and evening gun, or makes any other signal, the echo is repeated again and again loud and distinct, and then dies away with a rumbling noise like far-off thunder up some distant glen. The deer feeding on the grassy burns of the corrie hear it, and lifting their heads, listen intently to the strange sound, until, having made up their mind that it is not a matter that concerns them, they resume their grazing, only listening with increased watchfulness for every noise.

As the risks and expenses of carrying on the herring fishings are large, so are the gains considerable, if the season is favourable and the fishing lucky.

It would be a very great assistance and cause of safety to the

seamen on our northern and most frequented fishing stations had they the advantage of a few small steamboats, or tugs, such as we see in numbers issuing out of the Tyne and other rivers of England grappling with great black colliers and traders several times as big as themselves, and carrying them off (as a black emmet does a blue-bottle fly) in spite of wind and tide.*

One small steam-tug could tow a line, a perfect Alexandrine line, of herring boats to and from their fishing stations; and in the event of an approaching storm, a change of wind, or other dangers, they would be of the greatest use in bringing home the boats and nets, under circumstances in which, at present, much danger and much loss of life and property are sustained.

There is a general emigration from many of the western stations as soon as the herring season is over. Men, birds, beasts, and rats, among the rest, all desert them. Of birds the number is very great: having assembled to feed on the refuse of the herrings, particularly at the curing stations, they now depart in all directions; whilst the rats have occasionally been seen migrating in large numbers from Wick and other places, and distributing themselves through the country, in order to change the fish diet, which they have for so many weeks luxuriated on, for a vegetable one. On the east coast, where the agricultural population is numerous, the refuse of the herrings is used in great quantities as manure, and being laid out in large heaps on the fields preparatory to being mixed with other substances, poisons the air, and attracts great numbers of sea-gulls, who appear very willing to exchange fresh fish for that which is half rotten; but a sea-gull has a most convenient and unfastidious appetite, thriving on anything that comes in his way.

The inhabitants, at least the males, of fishing villages are an indolent-looking race, going about all their land occupations in a slow and lazy manner, and being for the most part remarkably

* Better still, perhaps, if decked boats could be substituted for the open boats of our fishing villages.—ED.

ignorant. But we should bear in mind that they spend their nights at sea in laborious and fatiguing occupation, exposed to cold and wet, and that it is only during their intervals of rest that we see them, when they are lounging about half asleep, and leaving to their wives the business of preparing their lines and selling the fish.

The coiling of a long line, with about three hundred hooks on it, is a mystery to the unpractised and uninitiated. Each haddock boat takes out coiled lines with from two to three thousand baited hooks upon them; and yet so perfectly and skilfully are they arranged that they never catch or entangle, but run out with as great certainty and ease as a ship's cable.

The haddock fishing on the coast is carried on in smaller boats than the herring fishing; each boat has, however, more hands on board, required partly for rowing, and partly for working these long lines.

The boats frequently run forty or fifty miles to set their haddock and cod lines; going from Nairn and the adjacent fishing villages over to Wick, where they are almost always sure of a plentiful supply of fish.

Trawling for flat fish has not yet been tried here to any extent, but I have no doubt that it would be a most profitable and useful speculation. At present we get no soles, but occasionally some turbot are caught: for these, however, the demand is confined to a few of the neighbouring gentry; and consequently this kind of fishing is not much practised. A boat's crew does occasionally go out to fish for turbot, using a very simple and small kind of hang-net, and generally brings home a good supply.

Looking at the state of British sea-fisheries in general, it appears to me undeniable that the advantage derived from this great and inexhaustible source of wealth is as nothing compared to what it might and ought to be. It is true that of late years some enterprising individuals have done, and are doing, a great deal towards improving this branch of commerce; and the

speculations recently entered into for the more regular and more abundant supply of the southern markets will doubtless lead to more extensive competition and to improved methods of fishing ; but Government might, I conceive, greatly promote this important branch of national industry by regulating the size and construction of the boats, which are often most miserably inefficient, encouraging the fishermen in every possible manner, affording them the protection and assistance of large vessels and steamers at different points, during the busiest times of the fishing season, advancing money for tackle, boats, etc., to be repaid gradually by the fishermen, and also by having surveys made and soundings taken off many parts of the coast, in order to find out the banks and feeding-places of the cod and other large fish. The Dogger Bank and all the principal fishing grounds have been discovered by chance ; and it cannot be doubted that were a careful survey made, many other equally prolific localities would be found.

The fishermen would at once know, were they provided with charts of the different depths, etc., of the sea, where the best spots would be for fishing, according to the nature of the bottom, the currents, tides, etc. But they are quite unable to make these observations themselves, from want of proper boats and other appliances ; nor can a simple fisherman afford to spend weeks or days of fine weather in taking soundings and making systematic series of experiments ; and hence it is, as I said before, our best fishing banks have been found out by chance.

In short, our fisheries, by careful attention on the part of Government and by a very moderate outlay of public money, might be made the source of food and employment for thousands and tens of thousands more of our suffering population than are at present supported by them. The seas which surround our coasts contain an inexhaustible supply of wholesome and nutritious food, and nothing is required to render it largely available to all but a more efficient, systematic, and well-regulated mode of procuring it.

July 19 (1851).—At Covesea a fresh pair of peregrines have taken up their abode in the rocks since I shot the two in April.

July 20 (1849).—I find collectors very eager to get hold of the female ptarmigan with her yellow plumage. The nearest abode of the ptarmigan (*Lagopus albus*) is on Benrinnes. No other hills in this immediate neighbourhood are of sufficient height for this lover of the mist. In winter the ptarmigan is of a pure white, with the exception of a small black mark between the bill and the eye. The tail also is black. In spring the female is of a yellowish brown colour, marked with gray and black, while the male is more of a gray slate or lichen colour. In the autumn, and till cold weather comes on, both male and female take this same gray colour, so very much resembling the lichen-covered stones on which they are found as to make it very difficult to distinguish them. The ptarmigan seems never to descend from the summits of the mountains, and is never found in heather, keeping always to the loose stony tracts which are found above all vegetable growth, with the exception of the plants and mosses that can exist 3000 feet above the level of the sea in this country. It is very difficult to find the eggs of the ptarmigan. During the time when they are to be found the summits of the mountains are so generally covered with mist and rain that very few are really put into the hands of collectors, who are in nineteen cases out of twenty cheated with the eggs of grouse instead of those of ptarmigan. Indeed the eggs are so much alike that it is very difficult if not impossible to distinguish one from the other. In the few which I have taken with my own hands, I have fancied that the general shade is not quite so bright as in the grouse egg, but at the same time, in a lot of grouse and ptarmigan eggs mixed together, it would be impossible to separate with certainty the one from the other, many would be so much alike that the most experienced person might fail in knowing which was a grouse and which was a ptarmigan egg. The nest is placed in a crevice amongst the loose stones, and sometimes under a projecting slab

of rock. The fox and the eagle are the principal enemies of the ptarmigan, and where these animals are destroyed they will quickly increase. On fine days they are very tame and easily killed; on wet and rough days, however, they are wild, and take long flights, frequently from one summit of the mountain to another. In severe weather they often burrow under the snow to get shelter, and also to find their scanty food. The greatest destruction made amongst ptarmigan is when the shepherds first put their flocks to the tops of the hills, which is generally done about the time when the young birds most easily fall a prey to the dogs.

July 26 (1853).—In Pluscarden Wood I found a woodcock's nest with three eggs, at the foot of a tree. The forester told me he had flushed the old bird off it seven days back. She appeared not to have returned. About two hundred yards from the place, I shot an old woodcock in the act of carrying off a young one, rather larger than a snipe. They were in a high dry part of the wood, far from any marshy or wet ground.

July 27.—My retriever brought to me, while looking for ducks in Spynie, a water-rail about two or three days' old; the old one following the dog, and uttering cries of alarm and anger. He also caught and brought an old coot with its quill feathers all out, so that it could not fly. The dog always kills an old coot, though he does not hurt a wild duck in the least. I suppose that the reason is, that the coot scratches him severely with her sharp claws.

Among the available products of the sandy creeks and bays on this coast are immense quantities of excellent flounders. These fish come in with every tide, and though the great bulk of them return to the deep water, numbers remain in the pools which are formed at low water upon the sands. We occasionally drag some of these pools with a small trout-net, and are sure to catch a large quantity of these fish in one or two hauls. The flounders are of two kinds, the gray-backed flounder, and a larger sort which has red spots. The latter, however, is a

far inferior fish, the flesh being soft and flabby. Notwithstanding the abundance and excellence of the flounders, left, as it were, for any person to pick up, with scarcely any exertion, the country people very seldom take the trouble to catch them, excepting now and then by the line, in a lazy, inefficient way.

July 27.—The Dunrobin keeper has just written to me that he has killed a very fine hoopoe in the middle of Golspie. I have never seen it in this country.

In the woods near Loch Rannoch I saw a great many red-starts, siskins, crossbills, and red-pole.

The lesser red-pole (*Fringilla linaria*) is a very small but interesting species of linnet. Some specimens seem scarcely larger than the golden-crested wren. The forehead is of a dark red; the breast, throat, and rump are, in old males, of a carmine colour; the back is brown, the feathers all edged with a lighter colour; the crown of the head is carmine; the bill is yellowish, tipped with brown; the tail is dusky brown, and much forked. These are the leading marks of the male; but the plumage of different specimens varies very much. The female is far less bright in her colours. The red-pole breeds here not uncommonly. The nest is generally placed at the junction of a branch to the stem of a tree. It is made of grass and moss, interwoven with wool and lichens. The lining is warm, and consists of feathers, hair, etc. The eggs are bluish white, slightly spotted with red brown. The red-pole is easily caught with bird-lime, and very soon becomes tame and familiar, and apparently attached to its prison. I have more than once allowed them to fly out of the window, leaving it open for their return, and they have always come back to their cage, after taking a wander about the garden. In winter the red-poles collect in large flocks, either feeding on the weeds by the road or ditch side, or on the seeds of the birch or alder, hanging on the twigs like tomtits in all sorts of attitudes, and so occupied with extracting the seeds from their covering, that they may be caught by means of a horse-hair noose placed on the end of a stick. It is rather a matter of discussion whether

this bird, and a variety called the mealy red-pole by bird-catchers (*Fringilla Borealis*), is the same species. I have, however, no doubt of their being quite distinct. The "mealy red-pole" is considerably larger, and has a peculiar "mealy" look about its plumage, which appears as if the bird had been sprinkled over with flour. I have seen it also only in small companies of from two to six. It feeds like the lesser red-pole on alder and other seeds, but, as far as my observation goes, does not hang upon the branches, and put itself into the same tomtit-like attitudes as the latter bird. It is much more rarely seen, and I have not had many opportunities of closely comparing the two birds.



CHAPTER THE NINTH.

JULY.—Part II.

JULY, although not a month during which the sportsman finds much employment for his gun, is still to me a most interesting season. Every day that I walk by the lochs and swamps I see fresh arrivals in the shape of broods and flocks of young teal and wild ducks, and this year there are numbers of pochards swimming about in compact companies. Occasionally, too, when I am walking near the covers, an old roe, accompanied by her two large-eyed fawns, bounds out of some clump of juniper or brambles ; and after standing for a short time to take a good look at me, springs into the wood and is soon lost to view : or an old solitary buck, driven by the midges from the damp shades of the woods, startles me by his sudden appearance near the loch side, springing over the furze and broom, on his way back to the more extensive covers.

The roe have a singular habit of chasing each other in regular circles round particular trees in the woods, cutting a deep circular path in the ground. I never could make out the object of this manœuvre, but the state of the ground proves that the animals must have run round and round the tree for hours together.

Tormented by midges and ticks, the bucks often wander restlessly through the woods at this season, uttering their bark-like cry ; so like indeed is this sound to the bark of a dog, that it often deceives an unaccustomed ear. Of all torments produced by insects I can conceive nothing much worse than the attack carried on by the myriads of midges which swarm towards evening in the woods, particularly where the soil is at all damp.

For a time the smoke of a cigar or pipe protects one ; but no human skin can long endure the inexpressible irritation produced by these insects.*

This month is not, generally speaking, favourable to the angler. Salmon seem in most rivers to have given up moving, and the trout follow their example. Indeed the rivers are at this period very subject to great changes, being one day bright, clear, and very low ; and perhaps the next flooded over bank and brae by some sudden and tremendous thunderstorm in the higher grounds, which renders the water thick and turbid. The Findhorn is peculiarly subject to these rapid changes, flowing as it does for a great part of its course through a mountainous, undrained, and uncultivated country, surrounded by lofty and rugged heights, from the clefts of which innumerable streams descend into the valley of the Findhorn. This river, on any sudden and violent storm of rain, rises sometimes almost instantaneously ; and what a few minutes before was a bright clear stream, fordable at all the shallower places, suddenly becomes a turbid swollen torrent, which neither man nor horse can cross. In those parts of the river where the channel is narrow and confined between steep and overhanging rocks, these sudden risings take place more rapidly than in the lower parts near the sea, where the river has room to spread itself out.

One day towards the end of the month I went with my two boys and a servant to shoot rabbits on the island formed by the junction of the Findhorn and another stream near the sea. The river was so low, in consequence of long-continued dry weather, that we crossed it on foot at a shallow where the water did not

* "I believe," said Hope, "it is the speediest mode of inflicting death on any insect, and I know that to rub a drop (of turpentine) on your ears and brow is a way of giving comfort to man, if it gives death to insects. Many a brother of the angle has confessed this to me ; when I have given him a drop from my bottle, and shewn him that rubbing it on his face will protect him from these little animals, the midges."—*Life in Normandy*, vol. ii., p. 79.

reach to our knees. The day was hot, and the air heavy and oppressive ; and although we had not had a drop of rain, we heard distant thunder during the whole morning, and saw heavy black clouds hanging in the west, over the mountains through which the river runs. After idling about some time and shooting a few rabbits we went towards a small cottage built on the highest part of the island, to speak to the people who inhabited it. Whilst standing close to the door, we heard a sudden scream from a woman at work in the little plot of garden, and looking round we at once saw the cause. The river, as the woman emphatically expressed it, was "*coming down*." Over a wide space of sand and shingle, interspersed with patches of broom and furze, where a few moments before we had been hunting rabbits, there now came rushing down a wall of muddy water, carrying with it turf, stones, and trees, rolling over and over, and uprooting every bush which opposed it. Several of the trees must have come some miles down the river, being large Scotch firs, with their branches, stem, and roots, the roots sometimes still carrying in their twisted fibres great masses of the rocks on which they had grown. The water was coming down like a wall several feet high, sweeping everything before it ; and in far less time than I have taken to describe it, we were surrounded on all sides with its dark boiling torrent. Independently of the risk of being crushed to death by the floating and rolling trees, its rapidity was so great that the strongest swimmer could not have crossed it.

On came the flood, narrowing our little island every instant, by undermining and washing away the bank on which the cottage stood. Nevertheless, I anticipated no more inconvenience than perhaps having to pass the night where we were : for the building had stood all the torrents of the Findhorn since the great flood of 1829, although its inhabitants had more than once been cut off from any communication with the mainland for several days together. But the water was already higher than it had ever been since *that* flood, and the women of the house

were weeping in despair, their terrors being augmented by a prophecy which had lately been uttered by an old hag in the neighbourhood, to the effect that all the country within six miles of the coast should be swallowed up by floods during the last week of this very July. So strong an effect had this prediction on the minds of the people, that almost all the Highlanders who had come down to the coast, according to their custom, for the herring fishing, had returned homewards without putting their foot in a boat, to the great loss and inconvenience of the owners of the boats and nets, who had reckoned on the usual assistance of these men. It happened that floods of a most mischievous and unusual extent had taken place at the very time this woman had foretold.

For my own part, I felt chiefly annoyed at the alarm our absence would occasion at home, as it was already evening, and we had no means of making signals or of sending word where we were, it being quite impossible to cross the river at any point.

The water still rose, and continued to do so for half an hour longer, washing away our standing-place slowly but constantly. On looking round I could not but feel most grateful that we had not been overtaken by it before we reached this part of the island. Had we been in many of the places over which we had so lately passed, we must have been swept away at the first rise of the river, or, at best, have had to wade and scramble, at the risk of our lives, to some elevated point of land.

While standing near the house we saw two or three boats belonging to the ferryman and the salmon-fishers whirl past us. The flood having come on without the least warning, their owners had had no time to secure them. The rise, as I have said, continued for about half an hour, then suddenly it stopped, and in a few minutes the water began visibly to fall. Before long it fell more quickly, but still in no proportion to the rapidity with which it had risen. After it had been sinking somewhat above an hour, the tops of furze bushes began to appear above the water, and soon afterwards we saw a boat

belonging to the salmon-fishers, well-manned, and assisted by a rope held on the shore, coming down to a cottage a quarter of a mile above us. The main stream of the river was still quite impracticable; but this boat was coming down an old channel which was generally dry. By firing off my gun several times I caught the attention of the crew; and I was quite certain that they would know who it was that wanted help, and would come to us if possible. When the torrent had become somewhat less violent they came down, whirling through the flood to where we were. They took us on board, and by dint of skilful and strong rowing, and help from the rope held by those on shore, we were at length landed in a field, *not* across the real channel of the river, but across the flooded land on the other side of us, where the force of the water was less violent. Although I have been in a good many situations of danger by water, I never felt so helpless as whilst we were dashing about at the mercy of the torrent, over bushes, banks, and stranded trees below, any one of which, coming in contact, must have staved in or turned over our little boat, and then all chance of escape would have been out of the question. However, we landed safely, and although we were not above a quarter of a mile from my house, we had to walk round by the chain-bridge, a distance of five miles. We got home soon after dark, and before our absence had caused any alarm. With us the rain did not begin till the evening, but we afterwards heard that, further to the west, it had rained in torrents for many hours during the morning, accompanied by a most terrific thunderstorm, and that a great deal of damage had been done by the overflowing of different streams, which had broken up several bridges, and injured a great extent of land. A poor woman who happened to be wading the river a mile above us, at a place where it is divided into several streams, was caught in one of them, and although she managed to get upon a high bank, the flood soon reached her, and she was kept a prisoner, standing in the water, which at one time reached to her middle, till the fishermen heard her cries, and succeeded in

rescuing her. Had we been in any one of several spots where we fished almost every day, nothing could have saved our lives.

A singular instance of preservation from a similar danger happened during this same flood, but on a different river. On perceiving that the water was rising, a young man hurried across a shallow part to an island, on which were a few sheep grazing, intending to bring them across to the mainland before the flood had attained any serious height. He was, however, out in his reckoning; for he had scarcely set foot on the island when the river became so swollen that it was quite impossible for him to return. The flood soon covered the island, and the man had great difficulty to keep his footing, being up to his waist in water. To add to his danger, great pieces of timber and floating trees came sweeping past, any one of which, had it struck him, would have at once dashed him off the island. Several people who were on the shore, although so near, could do nothing to assist him. Presently the flood brought down, right upon the island, a gigantic tree, with all its roots and branches, and it seemed certain that he must be swept away at once. He was given up by all the spectators, and they turned away their eyes, not daring to look at this end of the scene. However, the very moment when the danger seemed the greatest, was that of his deliverance; for the tree, in consequence of its great size and weight, grounded when within a yard of the man, and remained fixed. He managed to scramble on to its branches, and to maintain his position until the waters subsided.

What becomes of the trout during these sudden floods it is not easy to say, unless, warned by instinct of the approaching danger, they retire to the deep holes and recesses under the banks, where the force of the water cannot reach them. It is very seldom that, on the receding of a flood, fish are found on the land, though certainly it occasionally happens that they are bewildered, and are either left high and dry or in the small pools at the sides of the river. When, also, the same cause that has made the stream overflow has filled the water with clay and

dirt, the trout become sick and weak, and are unable to contend with a force of current which they could easily have withstood in clear water.

As the flood decreases both trout and eels take to all the eddies and corners to feed on the numerous worms and grubs which are washed off the banks and fields into the water.

Very few birds and, comparatively speaking, few even of land animals, fall victims to floods. The rabbits manage to climb up into the highest furze bushes, or even into the branches of trees, and it is very seldom that any birds make their nests within reach of this danger. In the same manner that terns and other birds who lay their eggs on the sea-shore seem to have an instinct which teaches them the exact line to which the highest spring-tides ever reach, so do the land birds avoid building their nests in places to which the land floods ever ascend.

Let me wind up my notes of this bright summer month with a word or two of the gulls that now brighten air, earth, and water.

The common gull (*Larus canus*) is about seventeen or eighteen inches in length ; the bill is a pale yellowish green ; the irides are hazel ; the eyelid is of a red colour ; the head, back of the neck, and cheeks, are white, with gray spots or streaks ; the lower parts, the rump and the tail, are all white ; the upper parts of back and wings are pale blue gray ; the quill feathers are black ; the two first have a large white spot near the tip, the rest are tipped white ; the legs are pale gray, inclined to green. It breeds on rocks near the sea coast. The eggs are dark olive brown, spotted with darker brown. The young are two years in arriving at their full plumage. Like the other gulls it feeds partly on the sea-shore and partly on the land—where it picks up worms, grubs, etc., in the ploughed fields. In describing this and all other gulls, it is impossible to do more than describe an adult specimen, giving such marks as may serve to identify the bird. All gulls differ much at different seasons of the year, and at different ages, both in their plumage and also in the colour of their feet, legs, bill, and irides. I shot a very

beautiful little gull, not quite small enough for "minutus," being nearly thirteen inches in length, but much smaller than any black-headed gull. I suppose, however, that it is a very small specimen of the latter. The fields are literally covered with gulls of all sorts and ages.

The kittiwake gull (*Rissa tridactyla*) is about the size of the common gull. The head, neck, and under parts are white, the back and upper parts of the wings are pale blue or ash colour; the wings are tipped with black; the tail is white; the bill is greenish yellow; the legs dingy brown, with a slightly greenish shade; the hind toe is very small; the irides are dark brown. In winter the top of the head is pale ash colour, and the sides of the head are slightly streaked. The kittiwake breeds on the rocky cliffs of this sea-coast. I never, however, found it breeding in this immediate neighbourhood, though the birds are to be seen commonly during most of the year. The egg is (according to Jennings) "stone-coloured, thickly spotted with ash gray, and two shades of light brown." The sea-gull described in Bewick as "the tarroch," is the young of the kittiwake.

The Arctic skua or black-toed gull (*Stercorarius parasiticus*) is not uncommon on the coast, though never seen in flocks, but almost always in pairs. Its habits are peculiar: while all the other gulls are busy searching for food and satisfying their hunger, the black-toed gull sits quietly and apparently paying no attention to the busy flocks. As soon, however, as a gull, however large, has picked up and swallowed any large substance, the black-toed gull launches himself into the air, and pursues the bird on which he has fixed his eye. The latter screams and wheels swiftly in every direction to escape his pursuer, but in vain; every effort to avoid him is fruitless, and to escape farther persecution the gull brings up and ejects the coveted morsel, which the skua catches and swallows before it reaches the sea or ground over which they are flying. In this manner the robber makes his living, apparently never hunting for himself, but compelling the other gulls to give up the fruits of their industry.

Though smaller than many other gulls, this is a compactly made and active bird, with a flight much resembling that of a hawk ; the bill is of a blue black or lead colour ; the nostrils are placed nearer to the tip than to the base ; the legs and toes are of the same colour ; the webs are nearly black, but more or less variegated with white ; the whole plumage is of a very dark black brown. Some specimens are, however, slightly marked with dingy white about the sides of the head, and also on the lower parts ; the two middle feathers of the tail are longer than the rest ; it never breeds in this part of the country. In Mr. Jenyns' book this bird is described as "Richardson's skua ;" Bewick calls it the "black-toed gull."

The nesting-places of sea-gulls and some other kinds of water-fowl are curious things to see. The constant going to and fro, the screaming and wheeling about of the old birds, and the apparent confusion, are perfectly wonderful. The confusion is, however, only apparent. Each guillemot and each razor-bill amongst the countless thousands flies straight to her own single egg, regardless of the crowds of other birds, and undeceived by the myriads of eggs which surround her. So, also, in the breeding-places of the black-headed and other gulls, every bird watches over and cares for her own nest—though the numbers are so great, and the tumult so excessive, that it is difficult to conceive how each gull can distinguish her own spotted eggs, placed in the midst of so many others, exactly similar in size, shape, and colour ; and when at length the young are hatched, and are swimming about on the loch, or crowded together on some grassy point, the old birds, as they come home from a distance with food, fly rapidly amidst thousands of young ones, exactly similar to their own, without even looking at them, until they find their own offspring, who, recognising their parents amongst all the other birds, receive the morsel, without any of the other hungry little creatures around attempting to dispute the prize, each waiting patiently for its own parent, in perfect confidence that its turn will come in due season.

The common guillemot (*Uria troile*) has no breeding-place on the Moray coast, but is common enough in the Firth. At the places where they breed the guillemots collect in immense numbers. Each pair has but one egg, which is of a very large size in proportion to their body. The colour of the eggs is very varied, but the general hue is a green marked with irregular and eccentric lines and spots. They build no nest, laying their single egg on the bare rock. A community of these birds in the breeding season is a most interesting sight. Thousands of them crowd on every ledge of rock which can afford the smallest standing room; and a constant flight seems to be kept up to and from the sea. As a new comer arrives and wishes to settle on the rock, there is a general murmur and jostling together of those already provided with room, before he is admitted on to their ledge; and frequently an outsider is pushed or shouldered unceremoniously off the rock. Their food does not so much consist of fish as of small bivalves, marine insects, etc. The upper plumage of the guillemot is of a sooty brown or black, the lower part is white. There is either a variety or a distinct species of this bird, called the *bridled Guillemot* (*Uria lachrymans*), exactly resembling the last-named species, excepting that it has a curious white line dividing, as it were, the plumage of the head, and extending from the eye along the cheek. I have killed this bird in the Firth. The bill of the guillemot is much compressed.

The black guillemot (*Uria grylle*) is not nearly so numerous as the last-named species, and it is much smaller. The whole plumage is black, with the exception of a white band on each wing; the bill is black, and the legs and feet very bright red. The plumage at different ages and at different seasons varies considerably. It is a round plump-looking bird, and has the peculiarity of swimming much higher in the water than most water-fowl. This kind of guillemot lays two eggs, and places them in a crevice of the rocks, or under an overhanging ledge, instead of in the exposed situations chosen by the "foolish guillemot." The egg is of a light greenish white, much spotted with different

shades of brown. I never saw this bird fly at any height above the water ; it seems rather to flap or run along the surface. In rough weather it sits frequently in some cave or sheltered corner of the rocks, instead of riding fearlessly on the waves like other birds of the kind. It is not a very frequent visitor here, seeming to remain in the more northern parts of the island.*

The razor-bill (*Alca torda*) breeds in the same localities as the guillemot, but has its nest under shelves and in crevices of the rock. The egg is large, more regularly oval than that of the guillemot, and is of a fine buff or cream colour, marked with numerous lines and spots of reddish and dark brown. The bill of the bird is strong, and curved at the point. It is marked with a singular-looking white line, which passes from the corner of the eye to near the end of the mandible, and crosses the lower mandible. The upper plumage is black, with a narrow line of white across the wing. The lower parts are pure white, legs and feet black ; the wings are long and pointed, reaching to the tip of the tail. After very rough weather at sea, I have frequently seen several of these birds lying dead, and washed on shore amongst the sea-weed.

The puffin (*Fratercula arctica*) is a quaint and curious-looking little bird. It breeds in the same localities as the guillemot, razor-bill, etc., but places its egg in any convenient hole under ground, or under the rocks, at a distance of a yard or so from the surface. Woe to the fingers which pry incautiously into these dwellings, as the puffin's large and powerful bill closes on them with the sharpness and spring of a rat trap. This bird is but rarely seen far from its breeding-place, and though very numerous in those places, is but a rare visitor along our coast. The most striking peculiarity about the bird, and one that renders it unmistakeable, is its bill ; this is at least an

* Mr. St. John is right in his supposition. The "Tystie," as it is there called, is one of the most common birds in the seas about Shetland. Whalers and Arctic voyagers are familiar with it in far north latitudes under the name of the "Doveky."—Ed.

inch and a half deep at the base, the part next to the head is a fine pale blue, the remaining half to the tip is red or orange colour. The egg is dirty white, rough in the shell, but extremely brittle and easily broken.

During the herring season, or when any shoals of small fish frequent the coast, the solan goose (*Sula bassana*) is not at all uncommon along our coasts. From a very great distance the accustomed eye can distinguish the pure white plumage of the bird, with no other colour visible excepting the black tips to the wings, as with strong and rapid flight it sails to and fro at the height of forty or fifty feet above the water ; sometimes suddenly checking itself in the air, hovering motionless for a few seconds, and then dropping like a stone into the water, rising quickly again to the surface with a remarkably buoyant motion, much as a bladder would, which had been forcibly drawn below the surface and again suddenly allowed to rise. The bird immediately takes wing again and continues its hunting till, apparently satisfied, it flies off and is lost to the eye. Seldom seeming to rest on the water, the air seems to be its native and proper element. The gannet breeds on the Bass Rock in the Firth of Forth, Ailsa Craig, and on other solitary and precipitous rocky islands. The bird is white, with the exception of the large wing feathers, and a shade of buff on the crown of the head. It has a naked skin round the eyes of a pale blue colour. The eyes themselves are placed near the mouth, and looking directly forward. This, coupled with their pale yellow irides, gives the bird a very singular appearance. The young birds are spotted all over, and are three years before they acquire the white plumage of the adult. The egg is white, with a coarse chalky-looking shell.

The shag scarf (*Graculus Linnæi*). Though very like the cormorant, the shag is considerably smaller and of a glossy green colour, most of the feathers having a darker edge. The tail has the same worn and hard appearance as that of the cormorant. The irides are of the same pale green. The lower parts of the

plumage incline to brown. It has not the white marks which distinguish the cormorant. In summer the shag has a considerable crest. It is more constant to the salt water than the cormorant, and does not so much frequent the streams and lakes. The egg is dirty white, rough and coarse-looking.

During the winter season the solan geese disappear from the Bass Rock, going no one knows where. Their abiding places are probably regulated more by the supply of food than by the weather.*

I am by no means of opinion that either herring, salmon, or other so-called migratory fish, leave our coasts during those seasons when they disappear, or rather, I should say, when they are not caught. I am more inclined to think that they always continue in the same neighbourhood, retiring only to the depths of the ocean, where they rest quietly, safe from nets, instead of betaking themselves, as the general opinion is, to the other end of the world.

* The fishermen say that when the birds have all left the Bass they occasionally see them out at sea, off the coast.

The gannets on the Bass, though still numerous enough to form a most singular spectacle, are evidently decreasing in numbers, under the combined efforts of mischievous idlers shooting at them from boats and the annual massacre of the young birds in autumn. It is within the mark to say that from these causes there cannot be less than 2000 birds destroyed every year. It is easy to see that with a bird like the gannet, which only lays a single egg, such a course must eventually cause their entire destruction.

It is not always safe to presume upon the reported tameness and gentleness of these beautiful birds when breeding. On visiting the rock on June 18, 1863, when the sea was so unusually calm that we were able to push the boat through the cave on the western face of the rock till daylight was visible from the eastern side, while looking up at the hundreds of birds sitting on their nests with their tails all pointed seaward, one of our party told us a scene he had himself witnessed. A young man passing a cluster of nests on the surface of the rock poked at a grave-looking gosling, whose head was enveloped in its usual large wig of down, the old bird—now gliding down the wall of rock to the sea and anon soaring high up overhead—made a swoop at the intruder's face, and, narrowly missing his eye, caught him by the nose, and gave him a lasting memorial of his visit to Bass.—ED.

CHAPTER THE TENTH.

AUGUST.

DURING the first part of this month the mountain-bred birds, such as golden plover, dottrel, curlew, etc., are daily seen to collect more and more in flocks on the sea-shore or other places which suit their habits. In the lower parts of the country the dottrel is now a very rare bird, and it is seldom that many of them are killed, although they are so tame and easy of approach as to have obtained for themselves the local name of the "foolish dottrel." It is one of the peculiarities of this bird that one pair only breeds on the same hill. Whilst you may see thousands of golden plover on a hill-side during the breeding season, you will never find above one pair of dottrel on each ridge. The ring-dottrel and other shore birds become at this season more numerous day by day. Many insectivorous birds, also, such as the white-throat, redstart, etc., seem to draw gradually towards the eastern coasts of the kingdom, as if in readiness to depart. The wheatears almost entirely leave the wild rocky mountains of the North, where they breed, and are during this month caught in great numbers on the Southdowns of Sussex.

The dottrel (*Charadrius morinellus*) is a rare visitor, but may occasionally be found, both in August, on its way from its breeding quarters, and again in April. They retire to the highest parts of the country to form their nests, choosing that part of the ground which is covered with stone and shingle. The egg is light olive colour, with spots and blotches of a darker and browner shade. It may be distinguished from other birds of the kind by its totally different colouring. In size it is between

*

the golden plover and ring-dottrel. The crown of the head is black ; the forehead white, spotted with brown ; over the eye is a white stripe sloping downwards ; the eye itself is remarkably full, bright, and black ; the upper parts of a brown colour shaded with a dull green or olive ; the throat is dull white ; below this is a broad band of greenish brown, and next a band of white. The lower part of the breast is yellow brown or orange colour ending in a black band ; between this and the tail is whitish. The tail itself is brownish at the root, shaded off into a darker colour nearly black, and tipped with white ; the legs are greenish brown. This description is sufficiently exact to recognise the bird by, but different specimens vary very much. The dottrel is a remarkably plump bird, and excellent eating. The feathers are in great request with fly dressers.

The ring-dottrel (*Charadrius hiaticula*). This pretty little bird is to be found with us all the year. In the winter they wholly frequent the sands of the sea-shore. In the breeding season they are sometimes found a few miles up the rivers, but more frequently they breed about the sandy banks near the sea, and in retired places, sometimes close to high-water mark. They build no nest, merely scratching a small hole sufficient to contain their eggs, which, like those of all waders, are four in number. The eggs are of a pale buff or stone colour, with black and ash-coloured spots ; the shell is of a very fine and polished texture. The adult bird has a clear black gorget, broad on the breast, and narrow at the back of the neck ; the forehead is black, and a black mark extends from the bill to the cheek, above this is a white streak passing through the eye ; the crown of the head and back are of a pale ash brown ; the lower parts are pure white ; legs and feet are orange colour ; the bill is black at the point and orange coloured at the base ; the head is round like that of the golden plover, and the bill is short. The young birds have not the black band, and their plumage is altogether much less bright and distinct. They run with extraordinary speed, and it is difficult to overtake even a young bird.

Their cry is sweet and plaintive. In the spring they are very restless, flying and hovering about in a very peculiar manner while determining on their nesting-place. There is a small species of ring-dottrel (*C. curonica*) very much resembling the last named. The bill is, however, described as being quite black, and the feet flesh coloured. It is also much smaller.

The green-shank (*Totanus glottis*) is a very elegant species of sandpiper. It is of a slender shape, with long legs of a greenish colour ; the bill is from two to three inches long, and straight. There is a white streak passing through the eye, and the lower parts are all pure white ; the tail, white barred with brown ; the upper parts of the plumage are ash brown, the feathers darker in the centre than at the edges, the centres having a kind of bronze or metallic shade. The cry of the green-shank is loud and peculiar, uttered when flushed from the side of some pool or stream. They are usually found single or in pairs, and feed much under the projecting banks of pools or ditches, and not so much in the bare open ground as the red-shank and other similar birds. It breeds but very rarely in the northern parts of Sutherland. The nest is very difficult to find, and the egg, therefore, is much prized by collectors. It is of a pale olive brown, with small spots of a darker shade. The shell is smooth and delicate, looking more so, perhaps, than that of the egg of any other similar bird.

The regularity of the appearance and disappearance of birds in different districts is one of the most striking and interesting parts of their history, and is a subject worthy of more attention than it has hitherto received. It is well known to many sportsmen that woodcocks appear in certain woods, and even under certain holly bushes, or other favourite spots, on the same day of the same month year after year ; and in like manner and with equal punctuality, do numberless smaller birds, of less notoriety and of less consequence to the sportsman, make their annual flittings northwards or southwards. On referring to notes which I have made during several years, I find that I have

seen many migratory birds for the first time in each year, on either the very same day of the month or within one day of it.*

Even in the insect world the same punctuality in their change of abode is kept up, and an observant *out-of-door* entomologist will tell almost to a day when any particular moth or butterfly will first appear. The exclusiveness of some butterflies as to their locality is a very striking peculiarity of this insect. You may, year after year, find a certain kind in great numbers within a space of a hundred yards, but you may search in vain for a single specimen over the whole surrounding country; although both as to plants and soil it may seem as favourable for their production as the spot to which they confine themselves. I was told by a clever entomologist that I should find any number of specimens of a particular butterfly, which I wanted to procure, in a certain stone quarry, or rather where a quarry had once been, during the first and second week in August, but at no other time. My friend was perfectly right. Then and there, and then and there only, could I find this particular butterfly.

At the beginning of August I frequently find the crabs which frequent the rocks left exposed at low water either just about to change their shell or just after having changed it. Nothing can be more curious than the manner in which they contrive to draw their legs and claws out of their last year's covering, casting their entire shell perfectly whole and unbroken. I found the crabs about the rocks with their shells quite soft, having cast their covering of the last year. On some occasions the cast shell is found quite whole, even to the covering of the eyes and horns. On the 10th September 1848 [at Whitburn, Northumberland] I found one in this state, the crab having apparently only just finished the operation of extracting itself, as it was lying in the crevice of the rocks close to the empty

* The late Lord Holland remarked that the nightingale was always heard within three days of a certain day in the garden at Holland House. I think the day was the 15th May.—C. I.

shell. What is remarkable, the animal, immediately on having cast its shell, increases considerably in size. In fact, the only time that the crab has to grow in, is just after casting, as its skin commences immediately to harden into a new shell, and this done, all increase of size is impossible. Before casting, the flesh of the crab seems to be entirely turned into a watery substance enclosed in a tough skin, which enables it to draw itself whole out of the shell. Any one who has seen a crab must know how impossible it would be for the animal to drag its claws and legs through the small joints of these parts unless the flesh were totally changed in size and substance. Altogether, the power of a crab to cast its shell entire without breaking the covering of a single limb is one of the most extraordinary things in nature. Almost invariably a crab, while her shell is soft, is protected by a male crab, who remains with her, and, on the approach of danger, covers her with his body and claws, and dies rather than leave his helpless charge. Take him away, and put him at a distance of several yards, and he will return immediately to protect the helpless female. In a few days, however, the skin hardens into shell, and the crab no longer needs protection.

During the herring fishing it frequently happens that some strange and rarely seen monster of the sea gets either entangled in the nets or is cast upon the shore, while pursuing the shoals of smaller fish. Among others I have more than once seen a most hideous large-headed fish, whom the country people call sometimes "the sea-devil," sometimes "the sea-angel," but whose more regular cognomen is, I believe, "the sea-angler." The first name he owes to his excessive and wicked-looking ugliness; the second must have been given him ironically; whilst the third is derived from his reputed habit of attracting fish to their destruction by a very wily ruse. He buries himself, it is said, in the sands by scraping a hole with his two most unseemly and deformed-looking "hands," which are placed below what may be called his chin. Being in this way

quite concealed, he allows some long worm-like appendages, which grow from the top of his head, to wave and float above the surface of the sand : fish, taking these for some kind of food, are attracted to the spot, when the concealed monster by a sudden spring manages to engulf his victims in the fearfully wide cavity of his mouth, which is armed with hundreds of teeth sloping inwards, and as hard and sharp as needles, so that nothing which has once entered it can escape. So runs the tale, the exact truth of which I am not prepared to vouch for.*

August 4th.—We caught a young woodcock full grown in one of the woods near here. A dog disturbed it in the cover ; and it flew fluttering into the road, where it allowed itself to be caught by the hand, although it was quite as large as an old bird, and its wings apparently fully feathered.

The woodcock (*Scolopax rusticola*) breeds every season in the north of Scotland, not only in the large fir plantations, but also in the smaller patches of birch, etc., which fringe the shores of many of the most northern lakes. That those bred in the country migrate I have no doubt, as they all invariably disappear for two or three months between summer and the first frosts of winter.†

I have again, this year (1848), seen the old woodcocks carrying their young down to the soft, marshy places to feed. Unfitted as their feet appear to be for grasping anything, the old birds must have no slight labour in carrying their whole family (generally consisting of four) every evening to the marshes, and back again in the morning. They always return before sunrise.

Occasionally I have come upon a brood of young woodcocks in a dark, quiet, swampy part of the woods, near which they had probably been bred. In a case of this kind we may suppose

* A true enough account of the angler, *Lophius piscatorius*.—ED.
† I doubt this. I think there are places where I could find a cock all the autumn months.—C. I.

that the old birds are saved the trouble of conveying their young to a distant feeding-place ; but as the young birds are frequently hatched in long heather in dry situations, and far from any marshes, they would inevitably perish in the nest were they not daily carried backwards and forwards by their parents. The quantity of worms, required to sustain one of these birds, would astonish those town-bred naturalists who gravely assert that the woodcock "lives on suction."

The nest is placed at the foot of a tree in a patch of long heather, or indeed in any sheltered place ; most frequently in the driest and densest parts of the woods. It is formed of dry grass, leaves, etc., and is shallow, and made without much apparent care. The eggs are four in number, of a pale yellowish brown, blotched and spotted with reddish brown. They, however, vary much. As soon as the young are hatched, the old birds are obliged to carry them to the feeding-ground, which is often at some distance. The young, though able to run immediately, are tender helpless little things, and could by no means scramble through the tangled heather and herbage which often surrounds their nest, perhaps for many hundred yards. It long puzzled me *how* this portage was effected. That the old birds carried their young I had long since ascertained, having often seen them in the months of April and May in the act of doing so, as they flew towards nightfall from the woods down to the swamps in the low grounds. From close observation, however, I found out that the old woodcock carries her young, even when larger than a snipe, not in her claws, which seem quite incapable of holding up any weight, but by clasping the little bird tightly between her thighs, and so holding it tight towards her own body. In the summer and spring evenings the woodcocks may be seen so employed passing to and fro, and uttering a gentle cry, on their way from the woods to the marshes. They not only carry their young to feed, but also if the brood is suddenly come upon in the day-time, the old bird lifts up one of her young, flies with it fifty or sixty yards, drops it quietly, and

flies silently on. The little bird immediately runs a few yards, and then squats flat on the ground amongst the dead leaves, or whatever the ground is covered with. The parent soon returns to the rest of her brood, and if the danger still threatens her, she lifts up and carries away another young bird in the same manner. I saw this take place on the 18th May; the young were then larger than, or fully as large as, a snipe. I have, however, seen young woodcocks nearly full grown at the end of April, and I have again seen the young ones about half grown at 26th of July, and at different intervals between. I have also seen eggs of this bird at different times between March and the end of July. The inference, therefore, is, that the woodcock either breeds twice in the season, or is very irregular as to her period of so doing. The young birds are of a light reddish brown colour, mottled and striped with darker brown. The old bird if surprised with her brood in the day-time appears to act always in the same manner, and to carry off her young to safety. Before breeding, the woodcocks fly very much about the woods towards evening, uttering two kinds of note, one a low croaking noise, and the other a kind of note resembling two shrill chirps repeated quickly after each other. Those birds that are bred here migrate early in September. Although the woods abound with woodcocks in the spring and summer, during September scarcely one remains. The next flights appear towards the end of, or third week of October, and at every full moon fresh flights appear to come. For some time, till the frosts of winter begin to set in, woodcocks are often found on the open hill, sometimes in turnip fields, rushes, etc. But as winter advances they take to the woods during the day-time, flying to the swamps at night with a sharp rapid flight, resembling that of a snipe. They are not fat till the nights are sufficiently long to afford them plenty of time to feed. Their food consists of worms, of which they eat immense numbers. The upper mandible overlaps, and is slightly longer than the lower one, which enables the bill to pass without

obstruction rapidly into the ground. On examining the formation this is very evident. The female is rather longer than the male. Woodcocks differ very much in size, in shape of their head, and in the length of the bill. Far more so, indeed, than a casual observer would suppose.

August 5 (1847).—A rare and singularly formed fish was brought to me to-day by the fishermen. It is called the "Deal fish," or, locally, the "Saw-fish." The latter name is very expressive of its shape and proportions, the fish being flat *vertically*, instead of, like a sole or flounder, *horizontally*. The following is the description of the fish, which I set down at the time:—

Length, 3 feet 6 inches.

Depth, 7 inches.

Greatest thickness, between half and three quarters of an inch.

Colour, bright silver, with one very thin crimson fin running the whole length of its back.

The tail very transparent, fan-shaped, and of a bright crimson.

A large flat eye ;

And a small mouth, which the fish had a peculiar power of elongating to a considerable extent.

It had managed to get hooked through the back, by a common haddock-hook. I wished to have preserved the skin, as I believe that there are not above one or two perfect specimens extant ; but, unluckily, through a mistake the fish was destroyed.*

August 12th.—On this (to so many people) *dies memorabilis*, whilst shooting with a friend in Inverness-shire, I found a few old grouse lying dead, killed by the prevailing disease, which of late years has committed such havoc amongst these birds in certain districts ; some which we killed were already attacked by it. Whenever this was the case we observed that the plumage of the bird was much altered, having a red rusty appearance instead of the fine rich colour characteristic of the grouse.

* The Deal fish is the *Bogmarus arcticus* or voegmeer, sometimes taken on the coasts of Orkney and Shetland. The fish here described seems to be the Blade fish (*Trichiurus lepturus*).—Ed.

The feathers, too, had an unnatural kind of dryness about them, which gave the bird a bleached, unhealthy look.* In those grouse which I opened myself the presence of the disease was indicated by the liver being apparently rotten.

Whatever is the cause of this mortality, it is a matter of some consequence to the proprietors of those districts where the grouse-shootings let for as high or a higher rent than the sheep pasturage; for it can scarcely be expected that sportsmen will continue paying at the rate they do for the right of shooting over tracts of ground where the grouse are becoming almost extinct, as is the case in several places. Instead of sparing the birds where they are attacked by this epidemic, I should be much more inclined to shoot down every grouse in the infected parts of the hills; and I would continue to do this as long as any appearance of the disease remained. I would then give them a year or two of rest according to the numbers and appearance of the birds. This seems to me the most likely way to check the destruction caused by what the keepers call the "grouse disease." In some parts of the Highlands there were scarcely any young birds seen in August, and the old grouse were picked up in dozens, dead on the heather.

I observed one peculiarity in the habits of the grouse in 1847, which was new to me. They were collected in large flocks on the 12th of August in the fields of oats in the elevated districts, which were at that time unripe and green. In every field near the moors there were large flocks of the old birds busy in the midst of the corn; but they always took the precaution to leave some sentries outside, who stood perched on a piece of rock or an old wall, with their necks stretched to their utmost height, on the look-out for any approaching enemy. When the corn is ripe, and especially after it is cut and in sheaves on the field, the grouse are very fond of it, and fill their

* The readiest outward test of the disease is the state of the leg feathers. In diseased birds the fur stockings are wanting, or miserably smirched and worn.—C. I.

crops daily with oats, like so many chickens, but before this season I never saw them attack the green and empty oats. There was at this time a very unusual deficiency in the growth and bloom of the heather, causing great scarcity of the tender shoots which form the principal food of the grouse ; and this may have driven them to the new kind of food, to which they appeared to take very kindly.

It is in the oat-fields belonging to the small farmers and others living near the grouse hills where the greatest havoc is committed amongst grouse by the poachers, for there they can be caught with the greatest facility, in any number that may be required for the market ; and it is more difficult for keepers to prevent this kind of poaching than any other, as it may be carried on by girls or children late in the evening and early in the morning, the snares being removed during the day-time, or on the appearance of a keeper, whose approach in this kind of open country may be perceived from a sufficient distance to enable the poacher to remove all traces of his proceedings. Thousands of grouse are killed in this manner for the London and other markets.

This year (1848), on the very first day of the shooting, I happened to be in a poulterer's shop in a large town in Northumberland, when a servant came in to buy a brace or two of "*well-kept grouse fit for immediate use*," for his master : and a brace was instantly handed to him from amongst a great number, which looked as if they had been killed a week or ten days ; at any rate they were nearly putrid, and according to my taste fit only to be flung away. If this system commences so long before the birds are legally saleable, we may easily imagine what an immense number of grouse are illegally destroyed during the whole season, in spite of all the expenses incurred to preserve them.

In my opinion this wholesale system of poaching might easily be put a stop to by the *proprietors* of the land, who, by stringent agreements with their sheep-tenants and cotters, might prevent all trespassing on the hills, much more easily

than the tenants of shooting can do ; and really, considering the great profit in many ways that this bird is to the Highland landowners, it seems both their interest and duty to protect and assist sportsmen in every possible manner in preserving the game : whereas, let the matter be glossed over as it may, every lessee of grouse-shootings knows how very little assistance and encouragement he receives from nine proprietors out of ten, notwithstanding the liberal and somewhat exorbitant rents which are paid. There are, however, many exceptions to this state of things ; and landlords are yet found who identify the interest of their tenant with their own.

The rage for grouse-shooting, at present so great, is not likely to change, like many other fashions. The fine air, the freedom, the scenery, and all the other *agrémens* accompanying this amusement must always make it the most fascinating kind of sport in the way of shooting which the British isles or indeed almost any country can afford. The bird, too, in beauty and game-like appearance is not to be equalled. In fact, as long as grouse and heather exist, and the nature of man is imbued with the same love for sport and manly exercise as it now is, grouse-shooting will be one of our favourite relaxations from the graver cares of life.

Although, like others, I am excessively fond of this sport, yet I care little for numbers of slain ; and when following it independently and alone, am not occupied solely by the anxiety of bagging so many brace. My usual plan when I set out is to fix on some burn, some cool and grassy spring, or some hill summit which commands a fine view, as the extremity of my day's excursion. To this point, then, I walk, killing what birds come in my way, and after resting myself and dogs, I return by some other route. Undoubtedly the way to kill the greatest number of grouse is to hunt one certain tract of ground closely and determinedly—searching every spot as if you were looking for a lost needle, and not leaving a yard of heather untried. This is the most killing system, as every practised grouse-shooter

knows ; but to me it is far less attractive than a good stretch across a range of valley and mountain, though attended with fewer shots. I am also far more pleased by seeing a brace of good dogs do their work well, and exhibiting all their fine instinct and skill, than in toiling after twice the number when hunted by a keeper, whose only plan of breaking the poor animals in, is to thrash them until they are actually afraid to use half the wonderful intellect which nature has given them.

The grouse (*Lagopus Scoticus*) is peculiar to the British islands. There is a kind of grouse in Norway which nearly resembles it, but is sufficiently unlike and distinct not to be confounded with it. The grouse needs no description, its general appearance being known to all. It would be difficult to describe the plumage exactly, as scarcely any two grouse of mature plumage are quite alike. They vary from every shade of reddish brown to nearly black. The plumage of the young bird is generally much the same in all specimens, but after their first moult this difference of colour takes place. The colour and markings of the eggs are equally varied. Notwithstanding the immense numbers killed by gun, net, and snare, not including those which fall a prey to crows, hawks, foxes, and other vermin, grouse are still numerous enough to be a source of great profit in the way of rent to the proprietors of the heath-clad mountains of this country. That they are not already extinct in most districts is owing, I truly believe, to the preservation carried on by those who rent the shootings.

The nest of the grouse is placed in a tuft of heather ; it contains from eight to ten beautiful eggs, spotted and marked in a manner characteristic of the bird itself, though differing very much in colour. They are thickly spotted with reddish brown of different shades. The old birds are very attentive to, and careful of the young brood, and remain with them till the following spring. On the approach of, and during wet and rough weather, grouse pack, as it is called, that is, assemble in large companies. They are then very wild, and it is quite useless for the sportsman to

follow them. His best chance of filling his bag on these occasions is to pay no attention to the "packs," but to hunt for scattered single birds and pairs, a few of which are always to be found. When the heather is wet it is also of little use attempting to shoot grouse, particularly at an advanced period of the season. The 12th of August is, generally speaking, too early to commence regular grouse-shooting. The 24th would be a better day to appoint. The early period being only fit for those who shoot for the newspaper, as certain sportsmen seem to do whose names appear every season as having murdered some marvellous number of grouse on the 12th. One grouse in October is a more satisfactory prize to the real lover of grouse-shooting than twelve can be on the first day of the season. By October the grouse, instead of being, as in August, a half-plumaged and often half-grown bird, is one of the finest and most game-looking birds in the world. Since my recollection of grouse they have very much changed their manner of feeding. The small crops of oats which year after year encroach on the moor lands have taught these birds to appreciate corn as their food instead of the tender heather shoots on which formerly they fed. Now, instead of finding the crop of the grouse full of this latter food, you find that they have been feeding on oats like a pheasant or barn-door fowl. As long as anything is to be found on the stubble the grouse come from long distances every evening and morning to feed on them. Early in the season too they feed in great numbers in the standing corn. Great numbers are destroyed by means of snares in the corn-fields, more particularly while the sheaves of oats are left on the ground.

It is often asserted that the black game drive away the grouse, but I am not at all of that opinion; I do not consider that they at all interfere with each other. The same description of ground is not liked by both kinds of birds. The blackcock prefers rocky hill-sides, with plantations and boggy pieces of ground, clothed with coarse grass and different kinds of plants; while the grouse delights in wide open tracts where the heather is not too rank,

and where there is plenty of young heath, on the shoots of which they can feed. Burning the heather judiciously and at proper seasons is of great service to grouse, as it gives them heather of different ages—the young to feed on, and the older parts for shelter.

August 18 (1847).—Saw to-day in a wood near Lochlee the marks where two roebucks had either been fighting or chasing each other round and round a small tree. The ground was beaten in a ring round the tree, as if an animal had been tied to the tree and had been endeavouring to get away. Harry shot a hen-harrier ; the bird was washing at the edge of the loch.

The hen-harrier (*Circus cyaneus*) is common throughout the county, more especially during the winter, when it appears to leave its breeding-places on the hills and to frequent the low grounds, and more especially the neighbourhood of marshes and swamps. Its flight is low and not rapid, while it hunts the rushes or turnip fields, beating them regularly, and quartering the ground like an old pointer. No hawk hunts so late in the evening, as I have constantly seen it passing slowly over the reeds and rushes in the Loch of Spynie quite in the dusk, occasionally making dashes at the snipes and small birds which frequent these places. Though light in its body, and having apparently no great strength of limb, the hen-harrier is very destructive to partridges, young grouse, etc. It feeds also on reptiles, and I have more than once seen it strike and carry off a full grown rat. The nest is placed usually on the ground, or on a low furze bush. The eggs are white. The male bird is of a pale, clear, ash colour above ; the quill feathers are black ; the under parts and rump are of a pure white ; the irides are yellow, as are the legs and feet, which are long and slender. The female has a very different plumage, being of a deep brown above and of a yellowish white below, marked with triangular spots ; the tail is barred with brown and rust colour, and the rump is white. When on wing this white mark is very conspicuous, and, in consequence, the female hen-harrier is often called the ringtail, and

considered as a different species. The young males have the same plumage as the female. I have killed them frequently during the moulting season, when the plumage is in the act of changing, shewing the pale blue feathers of the mature male. It is a remarkably wary and quick-sighted bird, and appears to me to detect an enemy quicker than any other hawk. During the breeding season they destroy great numbers of young grouse.

Although the 20th of August is the day appointed for legal execution of the blackcock, yet in most seasons the 1st of September would be quite soon enough for the shooting to begin, as, until the commencement of September, the young birds have seldom acquired their strength or plumage, and can be knocked down before the pointer's nose with a stick almost as easily as shot; indeed I have frequently seen them caught in the hand. When in full vigour and plumage in October there is no handsomer bird than an old blackcock; and although his size makes him an easy mark, his cunning and strength are pretty good securities for his not falling too readily to the sportsman's gun. But in August even the old birds are not fit to shoot, being neither in perfect condition nor in full plumage. The blackcock is much more addicted to feeding in the corn-fields than the grouse is, and takes long flights for the purpose of reaching some favourite stubble-field.

Black game (*Tetrao tetrix*) abound in most parts of this district where the woods are suitable to them. The ground which seems to be best adapted to them is young plantation, where the grass and heath are long and rank, and intersected with rushy burns and pools. They do not feed, like grouse, on the shoots of heather, but on the different seeds, berries, etc., which they find on the hill-sides. In some places where berries are scarce, they eat the young shoots of the fir-trees. When they feed on this, or on juniper berries, which they are very fond of, their flesh is strong tasted and dry—the flavour of turpentine and juniper pervading the whole body, but more especially the legs. When free from this, the black grouse is excellent eating. During

the frosty mornings of March and April the blackcocks fight furiously. They collect about some favourite hillock or fallen tree, and there the strongest cock takes up its stand, strutting with outspread wings and tail like a turkey cock, and uttering his peculiar challenge. The younger and weaker birds remain at a respectful distance, not often daring to attack him, while the hens collect round the champion. Sometimes a most desperate *melée* takes place, and several cocks all fight together. They also collect and call in the mornings of September and October, though the battles do not take place as in the spring. The female conceals her eggs with great care and skill. The nest is placed in a tuft of rank heather, or under a small tree or bush. She takes great care of her young, attending them anxiously till they are full grown. The male is seldom seen with the young brood, and when he is found with them, loses no time in leaving them to take care of himself. He is then very difficult to get at, in open situations scarcely ever rising within shot, unless surprised over the top of a hillock or in some favourable situation. When the ground is much covered with snow or white frost, these birds sit frequently on the trees during a great part of the day. The hen is not so wild as the cock. It is not easy to ascertain, but I doubt whether they breed the first year—at least there are always more hens of black game without broods than I can account for in any other manner. Though so nearly allied to grouse, and though mules between black game and pheasants are not very rare,* I only know of two specimens of mule birds between black and red grouse. I have seen other birds which have been supposed to be a cross between these birds, but they have generally appeared to me to be the hen of the black game gradually changing her plumage to that of the cock, which they do in the same

* "We know now certainly that a mule occasionally takes place between the black grouse and pheasant."—Sir Wm. Jardine, Bart., Notes to his edition of White's "Natural History and Antiquities of Selborne," etc., 1853, p. 274.—Ed.

manner as the pheasant does. One of the specimens is in the Edinburgh Museum, and has the distinguishing marks of both its parents most decidedly.

August 23 (1852).—Immense numbers of wild ducks come now to feed on the standing barley.

August 24 (1853).—On Monaghty hill I put up three night-jars—an old one and two young ones. They were lying close together on the heather. The old one fluttered away, pretending to be lame; the young ones were as large as the old, but with short tails. The night-jar (*Caprimulgus Europæus*) arrives late in the spring. I never recollect seeing one till after the middle of May. It is probable that it would not find a sufficient quantity of large moths and beetles, on which it feeds, before that time of year. During the whole day the night-jar remains perfectly quiet, either lying flat on the ground or on a dead or fallen branch of a tree. In the latter case the bird lies lengthways on the branch, and not across it like any other bird, and its mottled gray and brown colour makes it nearly invisible till it startles the passer by by springing into the air close at his feet, alighting again at a short distance. Although perfectly harmless, and, indeed, serviceable to us, ignorant keepers kill the night-jar, solely, I believe, because it is called by many a night hawk, though one glance at the bird would enable the most casual observer to see that it could prey on nothing larger than a moth. As evening comes on, the night-jar is in motion, hawking for its prey, and wheeling rapidly round and round some tree or hedge abounding in moths, cock-chafers, etc. Frequently it alights on the ground, or a gate-post, or paling, where it awaits the approach of some large insect, on which it dashes. There is scarcely any bird which is so careless about the spot where it places its eggs—indeed, it makes no nest at all, not even scraping a hollow place in the ground. The night-jar lays her two eggs on a bare but perfectly secure place. In this country they are placed near the edge of a wood or plantation, on a spot of ground free from heather. The eggs are perfectly oval, being the same shape and size at

each end. They are of a dull dingy white, mottled and spotted with ash colour and brown. The plumage of the bird is ash coloured, and beautifully marked with brown, black, and white. The mouth is very wide, opening beyond the eyes. The name *Caprimulgus* and goat-sucker are quite misapplied. That of "night-jar" is far more appropriate, as at times, when it sits at night on a shed or other building—frequently on a house or chimney top—it utters a singular jarring kind of noise, not unlike the sound of a spinning-wheel, and which seems to make the building on which it is perched vibrate and tremble with the sound. Like the swallow tribe, it is not only harmless, but of great use in keeping down the too great abundance of insect life.

The old blackcocks have not yet got their curved tail feathers.

I find that towards the end of August, when the hill lakes and swamps are much disturbed by grouse-shooters, the wild ducks bring down their young broods in great numbers, both to the bay and to the lochs. Every evening I can make sure of killing a brace or two, as they fly to the corn-fields regularly when the sun sets; indeed they sometimes do considerable damage by trampling down and eating the corn before it is cut. But some of the wild ducks which are killed in the bogs and swamps have their crops full of the seeds of a coarse grass which grows in those places, and also of some of the wild fruits, such as blackberries, etc. Indeed I fancy that a wild duck is as nearly omnivorous a creature as can be found, almost as much so as the man who eats him: nothing which he can swallow comes amiss to him, whether fish, flesh, or grain. The teal, on the contrary, appears to be almost wholly insectivorous; at least these birds feed only in the swamps and shallow pools, never taking to the fields for grain or seeds; but living entirely on aquatic insects and some few small plants.

Although the widgeon breed in Sutherland, and perhaps in other parts of Scotland, I never saw one in this part of the country during July or August. I believe that this bird feeds neither on grain nor insects, but on aquatic grasses; and when

these are not to be had, he grazes readily on the grass-fields and banks near the sea.

The great art in getting at most wild-fowl is to discover their feeding-places ; for to these they always resort at certain times either of the day or of the tide, some kinds being more dependent than others on the ebb and flow of the sea ; whilst the common mallard is almost wholly nocturnal in his feeding, and does not regulate his movements by the state of the tide.

The sheldrakes, who were so numerous a few weeks ago about the sandbanks and bar, have now nearly all disappeared ; and their place is supplied by innumerable curlews and other waders, all of whom appear to find their food in the moist sands left by the ebb tide, which in this country contain an endless supply of shell-fish of different kinds, from the minutest species, fit only to feed the dunlin and sand-piper, to those which serve for food to the oyster-catcher, whose powerful bill is well adapted to breaking up the strongest cockles and mussels which are found in this district.



CHAPTER THE ELEVENTH.

SEPTEMBER.

Sept. 1 (1852).—One of my boys killed an otter, weighing sixteen lbs. The dogs caught him first in some furze bushes in a plantation near the river, but he got away from them, and Charlie shot him at a shallow two or three hundred yards below, where he waited for him while I hunted the deep pool above him with the dogs. An otter when driven in the day-time always goes down the stream, knowing that he can glide far more quietly with the stream than against it.

The first of September is by no means so marked a day with sportsmen in the north as it is with those in the southern parts of the kingdom. I well remember the eager haste with which, when a boy, I used to sally forth at the earliest dawn to wage war on the partridges. The birds, however, at that hour are restless and on the alert, the ground is wet, and the sport unsatisfactory; and in fact no one, I believe, who can number more than sixteen summers ever got up at three o'clock to shoot partridges without repenting his undue activity before mid-day.

In this country very little of the corn is cut at the commencement of September, and for all this month I never attempt to shoot more partridges than I may happen to want for the larder. As long as the fields are covered with standing corn, the only way is to hunt quietly round the hedgerows and banks exposed to the sun, or in dry-soiled turnip fields, during the middle of the day, when the birds come to bask and scratch. Both partridges and hares stick close to standing corn as long as an acre of it remains.

In this country, however, the wild-fowl and other birds

which frequent the shores and rocks always afford me as amusing sport as the best partridge-shooting; and at this season there is always a constant and endless variety of migratory birds collecting previous to their departure.

Wherever there is cultivation in this county there are partridges (*Perdix cinera*). Towards winter, however, there seems to be a partial movement of these birds from the small patches of cultivated ground on the higher districts to the richer and warmer districts. The soil is particularly well adapted for the breeding of partridges, being dry, full of grain, and with a tolerable mixture of furze and broom, in which they can hatch in security. The wide drains in some parts of the county are dangerous traps for the very young birds, as they frequently cannot climb up their steep sides. Partridges, however, when very young do not wander much from the high corn or bank of broom near which they are hatched. Weasels, stoats, and, worse than all, tame cats, destroy a great many young partridges; while hawks, such as the peregrine falcon and the sparrow-hawk, and the hen-harrier, are very destructive to the old birds. The nest of the partridge is often placed in a very frequented neighbourhood, or close to a road or footpath. The old bird, however, conceals not only her eggs but also the track which she makes through the herbage in going to and from her nest with the greatest care and cunning. They lay from twelve to eighteen eggs. The male bird accompanies the brood throughout the season, taking as much care of them as the female does. Both in pheasants and partridges the number of cock birds reared far exceeds the hens. The sportsman will observe that he kills far more of the former, and still it always appears that the proportion of males left in the spring is too great. It would often be a judicious thing to allow the keeper to kill off a great number of cocks in the spring when they begin to fight. This would be easily done, as their plumage is sufficiently distinct to enable him to pick them off. I have been told by men who have reared several hundreds of both pheasants

and partridges that there are two cocks for every hen in both kinds of birds. The farmer cannot complain of the mischief done by partridges. The crop seldom contains anything but small seeds and a few blades of grass or clover. Sometimes they take to eating turnips even in fine open weather, but cannot commence a hole in a sound root, only picking small pieces off one already broken by rabbits or rooks. In most seasons the first of September is too early a day to commence killing partridges; the 14th of the month would be quite soon enough for shooting more than may be absolutely wanted for the larder. Neither the old or young birds are fit to be killed before this date. Nor indeed can they be said to have acquired their full powers of flight so as to render them a fair object of pursuit till their plumage is complete. The most destructive manner of poaching partridges is at night, by means of a net. It is easy to ascertain in what field a covey roosts by their calling about dusk. They generally lodge for the night in a bare grass-field. When the poacher has found out in what field they are after it is dark, the net is drawn over them, and the whole covey is taken at once. The only preventive to this kind of poaching is to place rough bushes in the fields where the birds usually roost. These hinder and tear the net. In frosty weather this method cannot be well practised, as every frozen mole-hill or inequality is apt to tear the net. While trying for partridges it often happens that woodcock are taken. The hen partridge is a most careful and affectionate mother, shewing the strongest signs of distress on any danger approaching them, and even giving battle to crows and other enemies in their defence. In more than one instance I have seen an old partridge fly at a dog which had come near her brood.

There is one very numerous class of birds, the sandpipers and others of the same kind, which are very little known. Even the best and most quoted authors of works on natural history are constantly in error with regard to the names and classification of these birds, and although I do not pretend to be

acquainted with all, or nearly all, the varieties, I know enough of them to perceive that the numerous changes of plumage which each species goes through, according to their age, sex, and the season of the year, have completely misled most naturalists. Indeed to know these birds perfectly requires much greater attention and more minute examination than has yet been expended upon them. Such also is the case as regards sea-gulls and some kinds of hawks, though with these the difficulty is not so great.

The knot or ash-coloured sandpiper (*Tringa canutus*) frequents some parts of the shore, such as that between Nairn and Findhorn, in immense flocks during autumn and winter, and is one of the earliest of the autumn visitors. It is rather a stout short-made bird. The upper parts are of an ash-coloured brown, and the under parts white, more or less pure, according to the age of the bird. The bill is a little more than an inch in length, of a dark brown. The legs and feet are gray brown, with a green tinge. The irides are hazel. There is a white stripe over the eye. It does not breed in this country. When on wing they fly in dense flocks, which frequently have the appearance of a small cloud as they wheel to and fro, so close and numerous are the birds. It is rather a shy bird, frequenting the most retired parts of the shore.

The pigmy curlew (*Tringa subarquata*), which is considered rare in most districts, visits us regularly in September, and I have sometimes seen considerable flocks of them on the coast. During the whole winter a few remain, and are then generally found singly. They are extremely tame, often allowing themselves to be approached within a few paces, and then only flying for a short distance; when they rise they utter a short, gentle cry, but at other times are silent. When a single sandpiper is seen on the shore, far tamer than these birds usually are, it may be safely supposed to be one of the pigmy curlews. They are about the size of a common sandpiper, but the bill is longer and conspicuously curved downwards. The upper part

of the plumage has not the same olive tinge, but is inclined to a reddish brown tint. The breast and lower parts are also of the same shade, but grow pure white as the winter advances; the tail is ash gray; the two middle feathers longer than the rest; the bill is nearly black; the legs and feet are brown gray; the irides brown, and it has a white streak over the eye.

As I have already remarked, I always find that the grouse are wilder in September than in any other month. They are well scared and driven about by the August shooting, and are not yet tamed down by the autumnal frosts and cold. In this part of Scotland we have much wild and stormy weather in September; and many an English sportsman, towards the end of the month, when located in some small shooting-lodge in the wild and distant glens of the inland mountains, begins to think of taking his way southwards. The incessant rain driving pitilessly down the glen where his confined and badly built cottage is placed, rivers turned into torrents, burns changed into rivers, and the grouse unapproachably wild, all combine to drive away many a southern sportsman before the end of this month; and yet October and November often are better months for grouse-shooting than the latter part of September.

Here, in Moray, we have a more favourable climate, and it is very rarely that there is any long continuance of bad weather in the lower parts of the county. Many a storm passes harmlessly over our heads to fall on the high grounds a few miles from the coast. These storms of rain or snow, although they pass over us, have always the effect of lowering the quicksilver in the weather-glass as certainly as if they fell here, instead of only threatening to do so.

Sept. 8.—The earliest day on which I ever killed or saw widgeon in Moray was the 8th of September, on which day I shot a brace, late in the evening, as they flew over my head on their way from the bay to some inland lake. They were both young birds. The flock altogether consisted of eight or nine. In the same year I killed a jack-snipe (*Galinago gallinula*)

on the 16th, which is far earlier than these birds are usually seen (I have never yet ascertained that they breed in Britain), and during the next ten days I killed four others in nearly the same place, some of which were undoubtedly young birds. It may therefore be supposed that a chance pair occasionally breed in the north, as it does not seem likely that those which I killed had been bred out of the island. In no other year have I ever seen a jack-snip before the 8th of October; even that is very early. I have made much inquiry on this subject in Sutherland and in other likely localities; but have invariably found that where the jack-snip has been supposed to have been seen during the breeding season, it has turned out to be the dunlin, or the common snipe. Neither their eggs nor young have ever been found, nor has the old bird been seen, for a certainty, in Britain during the summer season, excepting in the case of a single disabled bird.

A few jack-snipes come in September, but their general time of arriving is October and November. They do not leave till the middle of April. This bird is not so wild as the common snipe, and is often very difficult to flush. I have sometimes found them in the most unexpected places—in dry wood, amongst tall trees, in sandy places quite away from water, and in other as unlikely looking spots. It is a very fat little bird. When it rises it utters no cry like the common snipe, and usually pitches again very soon.

Sept. 10 (1847).—Went up to Glenalladale. Saw several eagles among the high mountains in that country; ptarmigan also, and some deer. The stags' horns this year are by no means remarkable for size; the spring was backward, and they had not good feeding at the season when they were getting their new horns.

Sept. 17 (1849).—Shot six pigmy curlews the other day. I see at the swamps some sandpipers which I cannot make out. There are vast numbers of every kind of wild-fowl arriving daily, and always some peregrines hunting.

The landrail is seldom seen here after the corn is cut, not-

withstanding the great numbers which breed in the neighbourhood. It is peculiarly a summer bird ; and although its cry is hoarse and inharmonious, I never hear it without pleasure, associated as it has become in my mind with the fine light nights of June and May. A fearless little bird it is, too, when caught uninjured. I have seen it immediately after being made a prisoner, and while held in the hand, peck at and catch with wonderful rapidity and precision any flies that might pitch within its reach. Its manner of departure from this country would appear to be still unexplained, as it is never seen *en route* either by landmen or sailors.

When this and other insectivorous birds leave us, winter visitors arrive. The turnstone (*Cinclus interpres*), a bird that breeds in Norway, arrives in this country at the first commencement of the month, but appears only to make it a temporary resting-place on its way to the south. They come, however, in small numbers, and remain but a short time, appearing on most parts of the coast. They are not at all a shy bird, seeming too busy in searching under the gravel and stones for the insects on which they feed, to think of any danger. Their name of turnstone is well applied, as they turn over the small stones with great perseverance and rapidity. It is a compactly made bird, and of a stouter form than most of our sea-shore birds. The forehead next to the base of the bill is white, above this is a black streak, which is joined by one of a similar colour coming from the lower part of the bill. This black mark continues past the eye to the cheeks, which are also black, thence it runs to the breast, and upwards to the back of the neck. The extent and depth of this black varies in different specimens which I have seen. The crown of the head is dingy white, spotted with black ; the upper parts are variegated with black, white, and light brown ; the feathers being principally black, edged with reddish brown ; the rump is white, with a black bar ; the tail is black, tipped with white ; the lower parts are white ; the legs and feet are orange red ; the bill is black, and rather strong in

proportion to the size of the bird ; the colours of the female and young are duller.

Like many other birds, the eagle occasionally, though rarely, exhibits great varieties in the colour of his plumage. This year (1848), during the month of September, I saw a freshly-killed sea-eagle, or white-tailed eagle (*Haliaëtus albicilla*), whose colour was a fine silvery white, without the slightest mixture of brown. The bird was killed in Sutherland ; and I was informed that another eagle had been seen in its company with the same unusual plumage. Our specimen had quite arrived at maturity, but did not appear to be very old. Partridges, pheasants, grouse, and many small birds occasionally appear in a snow-white dress ; but the birds of prey seldom change their colour. A black swan we read of as an example of a "*rara avis*," what must then a white crow have been thought of by the augurs and omen-seekers ! Yet rooks and jackdaws, both parti-coloured and white, are by no means so uncommon with us as to be looked on as wonders.

This white eagle had been probably bred on some of the wild rocky headlands of the north coast of Sutherland, where not even the value of the eggs can at all times induce the shepherds to attempt their capture. The sea-eagle is, in its habits, a sluggish, vulture-like bird, feeding chiefly on the dead fish and other animal substances which are cast up by the sea on these lonely and rugged shores, and seldom attacking the lambs of the farmer to the same extent as the golden eagle does. Although it is frequently seen, and its sharp bark is heard far inland, the usual hunting-ground of the sea-eagle is along the shore, where it can feed on its foul prey, undisturbed and unseen by human eye for months together. Like the golden eagle, this bird sometimes so gorges itself with food as to become helpless, and if then met with, may be knocked down by a stick, or captured alive before it can rise from the ground—a sad and ignoble fate for the king of birds ! After all, the eagle is but a sorry representative of royalty and

kingly grandeur ; for although his flight is noble and magnificent, and his strength and power astonishing, there is a cruelty and treachery about the disposition of the bird which render it unfit to be educated and trained like the peregrine and other falcons ; nor does it ever become attached to its keeper. Its plumage has a mottled appearance, and is more or less tinged with ash colour. The mature bird has a white tail, a distinguishing mark even at a distance. The legs are not feathered below the knee, nor are the talons as finely pointed and sharp as those of the golden eagle. The eggs are not so much marked with red as those of the golden eagle, being of a dirty white all over, sometimes slightly marked. The bird itself, though fully as large, is inferior to the golden eagle in beauty of plumage and compactness of form.

It is not easy to determine the length of years bestowed on any of the wild animals. There are no specific and well-ascertained facts on which to form a valid opinion. On all such subjects the most positive *assertions* are often so ill supported by *facts*, that the naturalist should be most careful and guarded as to the evidence on which he founds his opinion. It seems, however, reasonable to suppose that the age attained by all animals bears a certain proportion to the time which they take in coming to their maturity in size and strength.

Judging by this criterion, the eagle may be set down as one of the longest lived of our British birds ; as he certainly does not arrive at the full maturity of his plumage for some years. On the other hand, the swan puts on her white feathers at her first moulting, yet is said to live to a very great age ; and there are well-authenticated instances establishing that this is the fact. Geese, too, live to a most patriarchal age. The period of life of tame falcons does not exceed eight to ten years—at least so I am assured by some of my acquaintances who have kept these birds. A wild hawk, barring accidents from shot or trap, has, probably, a better chance of longevity than a domesticated bird, however carefully the latter may be tended, as it is almost impossible to

hit upon the exact quantity, quality, and variety of food which best conduces to their health, or to give tame birds as large a share of exercise and bodily exertion as in their wild state they would be constrained to take in pursuit of their daily prey. Common fowls live to the age of ten or twelve years, but become useless and rheumatic after six or eight. Such, also, is the case with pigeons. I knew of a pair who lived for fifteen years, but they were barren for some years before their death.

The length of life of small birds is probably less : but it is difficult to form an accurate opinion on this point ; for any deductions founded on canaries or goldfinches in a state of confinement must be fallacious, as caged birds are subject to numerous diseases, from over eating, from improper and too little varied food, and a thousand other causes, which do not affect those who live in a state of natural and healthful liberty.

It is a curious fact, that one scarcely ever finds the dead body of a wild bird or animal whose death appears to have been caused by old age or any other natural cause. Nor can this result from the fact of their being consumed immediately by animals of prey, as we constantly meet with the bodies of birds who have been killed by wounds from shot, etc. Either the wild animals on the approach of death creep into hidden corners of the earth (as donkeys and postboys are said to do), or nearly all of them, before they reach extreme old age, are cut off by their common enemy, mankind, or serve as food to birds and beasts of prey.

I have, however, killed both eagles and foxes who bore unmistakeable marks of extreme old age ; the plumage of the former being light-coloured, thin, and worn ; so worn, indeed, as to lead one to suppose that the bird could not have moulted for several seasons, and the foxes' faces being gray and their jaws nearly toothless ; yet they were still in good, and even fat condition. In animals, age and cunning supply the place of strength and activity ; so that the eagle and fox are still

able to live well, even when they have arrived at the most advanced age assigned to them.

Very old deer become light-coloured and grayish, especially about the head and neck, and have a bleached and worn appearance over their whole body. Their horns, also, lose much of their rich appearance both as to colour and size, becoming not only smaller, but also decreasing in the number of their points. The Highlanders assign a great age to the red deer; indeed they seem to suppose that it has no limit, save a rifle ball; and they tell wonderful stories of famous stags, who have been seen and known for a long series of years in certain districts. Though these accounts are doubtless much exaggerated, it is tolerably certain that their life extends to from twenty to thirty years. I do not imagine that in these days stags have much chance of reaching that term. At the age of seven or eight years, the animal having arrived at full perfection as to size and beauty of antler, is marked down for destruction by the numerous sportsmen who wage war against him in every part of the north. Their numbers in certain preserved districts have, no doubt, increased to a great extent; but very few of the fine, rugged, and far-stretching antlers, which adorn the halls of many of the old houses in the Highlands, are now to be met with on living deer. Where not brought down by the licensed sportsman, a fine-headed stag has now so high a price set on his head, that he is sure to fall by the gun of some poacher or shepherd. I have known as large a sum as five guineas given for a stag's head; and when this is the case, nothing else can be expected but that every stag whose horns are peculiarly fine will be killed.

I have occasionally shot roebucks, and still oftener does, shewing by their size, colour, length of hoofs, etc., that they had reached a tolerable old age; but, like all persecuted animals, the chance of their attaining their full extent of days is so slight, as scarcely to give us the means of ascertaining how long they would live if secure from danger.

Sheep of seven or eight years lose their teeth, more or less, and shew symptoms of their best days being past. But these, like all other domesticated animals, do not afford a good criterion to judge by, as they are all under an artificial system as to food and manner of living, which makes them, like man, subject to many diseases and causes of decay, which would not affect them in a state of nature.

Sept. 27 (1847).—Saw peewits and swallows still in the country.

On the 28th of September (1846 ?) the last house-swallow took his departure from this neighbourhood, although the season was so fine that there were several nests of young greenfinches about the garden even so late as the 30th of the month, and a wood-pigeon was sitting on its eggs in an ash tree close to the house.

During the latter weeks of the fishing season (which legally ends on the 15th of September in all the northern rivers), the lower pools of the Findhorn are full of an excellent small sea-trout, locally called the finnock. My opinion is that the "finnock" is the grilse or young of the common sea-trout, bearing exactly the same relation and affinity to that fish as the grilse does to the salmon ; but the natural history of the inhabitants of another element is too uncertain and difficult a subject for a mere casual observer to enter upon. At any rate, the finnock is not only an excellent fish for the table, but affords capital sport, rising freely, and playing boldly when hooked ; and has altogether strong attractions for those anglers who somewhat love their ease. I have been much amused by seeing an elderly, placid-looking London gentleman, who was staying at Forres for the purpose of fishing in the Findhorn. He arrives at the river's edge at a comfortable noonday hour, accompanied by his lady and a footman splendid in blue and red, who carries camp-stools, books, fishing-tackle, and last, though not least, a most voluminous luncheon. Daily this party makes their appearance at a certain pool, and while the old gentleman,

seated at his ease on his camp-stool close to the water, with spectacles and broad-brimmed hat, fishes away with the well-known perseverance and skill of a Thames angler, his lady reads her book on one side, whilst on the other the red-legged footman either prepares the luncheon or holds in readiness the well-stocked fly-book of his master. Very different would be the description given of our Scotch fishing by one who thus practises the gentle craft on the level grassy banks of the lower pools of the Findhorn, to that of the sportsman who seeks the salmon over the rugged passes of the rocks which overhang the deep black pools and rushing torrents of the same river between Dulsie Bridge and the Heronry.*

Most of the roebucks have, by the end of September, put on their winter covering of rich mouse-coloured hair ; so different from the thin red coat they wear during the summer. Until they have quite changed colour, the roe are not in sufficiently good condition to make them a fit object of pursuit for the sportsman.

The stag is, however, in perfection, both as to condition and beauty, during this month. The size of the horns of the red deer depends to a certain degree on the feeding which the animal gets in the spring and end of winter. If his food has been poor, and if he is much reduced, the horns do not acquire their full development and size.

I am much inclined to think that the uncertainty of getting a shot at deer in wood is even greater than on the open mountain. The cunning of the animals, and dislike to being driven in any one direction, frequently render abortive the best arranged plans for beating a cover. Sometimes the deer are off at the first sound of a beater ; at another time they will lie quietly without moving till all the men have passed them, and will then sneak quietly back in the contrary direction.

I was this very year (1848) particularly struck with an instance of deer escaping in this manner. I was placed with a

* See Letter to Mr. St. John from Sir Alex. G. Cumming in Memoir.

friend on passes commanding the extremity of a long narrow patch of cover which grew on a steep brae overhanging a beautiful river in Ross-shire ; and the beaters were to commence their work at the other extremity of the wood. We had taken our stations, at a considerable height above the river, at the most likely pass for the deer to leave the wood by ; there we waited some time without seeing anything excepting an occasional blackcock or gray hen, which, having been disturbed by the beaters at the other end of the cover, came skimming rapidly past us. Presently we perceived far below us four brown forms walking slowly through the high fern and herbage which grew amongst the birch-trees. As they emerged from the cover we saw that they were three hinds and a calf. With uncertain pace they went on, sometimes trotting in a line, and sometimes standing in a group on some hillock, from which they looked back earnestly and inquiringly into the wood. I was convinced by their manner that there were other deer, probably stags, still in the cover. As, however, the sound of beaters came nearer, the four deer gradually mended their pace, and in a quiet canter followed the devious track which led them to the summit of a steep hill to our right hand. It was interesting to see how, having once made up their mind as to their route, they went steadily and rapidly on in single file, winding up the face of the hill, sometimes lost to our sight behind a cluster of rocks, or a birch-covered hillock, and again appearing as they kept deliberately on their way. At the very ridge of the hill they halted again, and after standing in a confused group with their heads all together, and their long ears at full stretch, they at once disappeared from our sight.

The beaters came closer and closer to us, and in spite of my prognostications no more deer appeared. At last the men issued out of the wood, at the point nearest us ; and one of them came up towards where we were, to call us down. A drizzly shower had commenced, and we had put the gun-covers on our rifles, when suddenly from under a single birch-tree, which was about

fifty yards from us, and about the same distance from the beater, rose a magnificent stag, in the finest condition, and with "a head of ten." Before we could get out our rifles he was behind a rise in the ground which concealed him from us until he was too far for a ball to reach him; and then he again appeared galloping heavily off for the same point at which the hinds had crossed the hill. We were both of us dumb with surprise and vexation; but not so the Highlander below us, who, in the most frantic state of eagerness and rage, hallooed and vociferated in Gaelic and English, for the stag passed, broadside on, within forty yards of him. Without moving from our position we watched the animal for some time; then, returning our rifles to their waterproof cases, we, as if by a common impulse, lit the pipe of consolation in the shape of a cigar. Whilst so employed, with our heads bent from the cold misty blast, we again heard the man below us, shouting more frantically than before, and looking up we were just in time to see him fling his stick at another stag, who had risen from the same spot and had cantered away in a contrary direction, passing almost close to the beater. Like the first stag, too, he managed to keep his great body out of our view as long as within shot, although he almost ran round the man, as if perfectly understanding the difference between two double-barrelled rifles and one walking-stick. On getting to the place we found that the two deer had been lying in a small hollow of the ground at the foot of a single birch-tree, which stood a little in advance of the main wood. They must have lain with their heads close to the ground, hoping to escape being seen; and there they remained until they perceived that the beater as well as ourselves were walking directly towards them.

In taking up a position near a wood which the men are about to beat for deer and roe, the sportsman should go on as cautiously and quietly as if he were stalking a deer on the open hill, as nothing will drive either a stag or buck near a spot where he has discovered or suspected that any concealed danger is await-

ing him : rather than do so, he will pass within reach of the sticks of the beaters, having, like human beings, a far greater dread of an unknown danger than of one which he sees, and knows the full extent of ; and like many people taking "omne ignotum pro horribili."

Though red deer seldom come down to the woods in this immediate neighbourhood, I have occasionally seen one who has probably wandered away from the Duke of Richmond's forest.

Instances too sometimes occur of a stag being found in the act of swimming narrow parts of the Moray Firth ; a solitary deer who probably has been driven by dogs from his usual haunts, till frightened and bewildered he has wandered at random, and at last, coming to the shore, has swam boldly out, attracted by the appearance of the woods on the opposite side.

September 30 (1846).—Peewits collect in great numbers near the shore ; also golden plovers. Great flocks of young gulls are seen.

About the latter end of this month godwits (*Limosa aegcephala*) are always to be seen in small numbers along the sandy parts of this coast, and occasionally about the Loch of Spynie. They do not seem to remain long, but apparently only pay us a passing visit on their way southwards. The bill is between four and five inches long, slender, and turned upwards. The crown of the head, the back, and all the upper parts of the plumage, are of a pale ash colour, the feathers having the edges of a lighter shade. There is a white streak from the base of the bill over the eye. The lower parts are all white, with the exception of a few darker streaks on the breast. The tail is barred with black and white. The legs are long, bare above the knee, and of a dark colour, nearly black. In the summer the godwit has a shade of rufous or red brown on the upper parts of the plumage. It is, however, not seen in the summer dress in this district. It is a lively bird, active and elegant in its movements, and is said to be excellent eating.

The ruff (*Philomachus pugnax*) can scarcely be said to belong to this part of the kingdom. Its haunts are in Lincolnshire, Norfolk, etc. I however shot one specimen of the ruff near the mouth of the Findhorn. The bird was alone, and I never saw another individual of the species in this district.



CHAPTER THE TWELFTH.

OCTOBER.—Part I.

October is, in this country, one of the finest months of the whole year. The cold cutting winds of November are frequently preceded by bright, clear, sunshiny weather most enjoyable and invigorating to all whose avocations and amusements keep them much in the open air. The birds, both migratory and stationary, begin now to establish themselves in their winter quarters ; and scarcely a day passes which is not marked by the arrival or departure, or the winter preparations of some of the feathered races in this country.

October 4th.—During the mild season of 1847, I found a pair of young wood-pigeons in a nest near the house. A few days afterwards they were both dead, either from the old birds having been killed, or from the coldness of one or two of the succeeding days. The latest landrail that I killed was on the 6th, and a fatter bird of any description I never saw.

The rats return to the houses from the fields and the ditches.

Three or four quails (*Coturnix communis*) were killed at the beginning of October, in the eastern part of the county. During the month of May I constantly heard the call of the old birds close to my house ; and we saw them several times basking in the sun on one of the gravel walks.

Though I have never found their nest in this country, every spring, during the months of May and June, I hear and sometimes see the quails in the young corn and grass fields. Scarcely a shooting-season passes, too, without two or three or more being killed, more particularly in the flat country near Duffus. I also heard of one instance of a quail being killed in the

neighbourhood of Cawdor in December. The spring call of the quail, though low and musical, is to be heard at a considerable distance. I have often imagined that the bird was close to my feet, instead of which I have had to follow the sound over several fields before I have reached the actual spot where it came from. This call consists of two soft notes like a whistle. Quails have always been remarkable for two peculiarities. One is the immense flights which migrate to the coast of Africa, the Grecian Islands, Turkey, etc., etc. These migratory flocks still afford food and an object of pursuit to thousands during their continuance; and countless must the numbers be of these birds, though not quite making credible the account of Pliny, that "the quails alight in such numbers on the rigging of ships as to sink them by their weight." The ancient Romans and Greeks seem to have been as fond of fighting quails as the Chinese, the Afghans, and other eastern nations still are—the bird still keeping up its character for pugnacity. The egg of the quail is a yellowish white or buff colour, with blotches and spots of a red brown.

On the 10th (1846) I shot a crossbill out of a small company of five or six.

October 11th and 12th.—Large flocks of wild geese passed to the south. There was at the time a considerable sprinkling of snow on the Ross and Sutherland mountains. None of the gray or bean-geese seemed to alight anywhere in this neighbourhood during the autumn; but a flock of that very beautiful species the white-fronted goose took up their quarters about the fresh-water lakes. Being anxious to procure one of these birds, I went the following day to look for them. It is a long, tedious walk through the desolate country which bounds the sand-hills to the westward, and separates them from the lochs and swamps which the swans and geese frequent when in this region. After a long search for the birds a sudden gleam of sunshine shewed us their yellow bills and white foreheads conspicuously above the rough grass and herbage of the swamp

in which they were feeding. They did not appear to have taken any alarm at us ; so putting myself under the guidance of my old keeper, who seemed to have a perfect knowledge of every ditch and hollow of the ground by which an approach could be made, I crawled and wormed myself along to within sixty or seventy yards of five of the birds. To get any nearer, unseen, was impossible ; so, raising my head, and trusting to Eley's cartridges and No. 3 shot, I fired, and killed a brace of these very beautiful birds ; a third fell, but rose again, and recovered himself.

The white-fronted geese remained in or near the same district, with only occasional absences, during the whole winter, and until the month of April ; their habits in this respect being very unlike those of the bean-geese, who in this region are never stationary for above a few days. The white-fronted goose (*Anser erythropus*) is the handsomest species, both as to form and plumage, that we ever see in Scotland. The full-grown birds are distinctly and beautifully marked with black bands on the breast, and have a pure white spot on the front of their head. They are of a compact, firm shape, and walk with great activity and lightness while feeding. Unlike the bean-goose, they frequently feed in pools and swamps where some favourite plant grows ; and in situations which the sportsman can easily approach, sometimes close to furze or other cover. The other kinds of geese never by any chance commit themselves in the same manner, but always feed and rest in the most open situations, where it is almost impossible to approach them unseen. The white-fronted goose has much more the form and appearance of the common tame goose than the bean-goose. In this respect, as well as in the peculiar shape of the head and bill, it exactly resembles the gray lag.

18th.—I shot a gray gull five feet eleven and a half inches between the tips of the wings. Spawning trout get into all the small ditches, and wherever they find running water. Hen-harriers and other hawks come down and hunt the low grounds.

Redwings arrive in middle, fieldfares about the last week of the month.

A single very large wild swan appeared on the lakes on the 18th of October, and on the 20th he was joined by two more. The wild swans, on their first arrival, almost always fly into the bay from the south, coming in flocks of one hundred to two hundred together. The only way I can account for this, knowing that they must of necessity have taken their flight from the north, is, by supposing that they first alight on some of the mountain lakes between Findhorn and Strathspey. A large flight of these noble birds, as they circle round the fresh-water lakes on their first arrival, is one of the most beautiful sights imaginable.* There is, too, a wild harmony in their bugle-like cry, as they wheel round and round, now separating into small companies, as each family of five or six seems inclined to alight, and now all joining again in a long undulating line, waiting for the word of command from some old leader, whose long acquaintance with the country and its dangers constitutes him a swan of note among the common herd. At last this leader makes up his mind to alight, and in a few moments the whole flock are gradually sinking down on the calm loch. After a brief moment or two spent in looking round them, with straight and erect necks, they commence sipping the water, and turning their flexible necks into a thousand graceful curves and attitudes. They then break off into small companies, each apparently a separate family, and set to work, with seemingly a most excellent appetite, on the water-grasses and plants. I regret to say that the number of wild swans seems to decrease every year. Fewer and fewer visit this country, scared away, probably, by the

* Oct. 1844. — "The day after you left, there were above two hundred (nearer three hundred) swans on the bay below this. The largest flock I ever saw before here has been under twenty. They allowed us to stand about one hundred and fifty yards from them, and count up to one hundred and ninety, odd, when they all rose up together in a perfect cloud. It was really a magnificent sight."—*Letter to Mr. Innes.*

yearly alteration made in their favourite haunts and feeding-grounds, by draining and other improvements, which substitute oats for rushes, and sheep for wild fowl, an alteration by no means gladdening to the eyes of my old *garde-chasse*. The diminution in their numbers does not result from the quantity killed, which, comparatively speaking, is inconsiderable.

On their first arrival the swans are much less shy and wary than they are after a few weeks' experience and knowledge of the dangers which surround them. On these lochs, which are tolerably quiet, a flock generally remains during the whole winter. The feeding is good, and when anything disturbs them, the sands of the bay offer them a sure refuge. I seldom interfere with them, unless I happen to want one for any purpose; and in reward for this forbearance I have the pleasure of seeing them every day in nearly the same part of the water, either feeding on the plants or pluming themselves on the small banks and islands. Their favourite loch is, of course, the one least accessible to any enemy.

The flesh of the wild swan, at least of those who feed inland, is perfectly free from all strong and unpleasant flavour, their food consisting almost wholly of a kind of water-grass which has a bulbous root. In these lochs there is a good supply of this plant, and the swans become very fat, so much so as to make it exceedingly difficult to preserve the skins, the only part of them which I put to any use.* When the feathers are picked out, there remains on the skin a great thickness of very beautiful snow-white down, which, when properly dressed by a London furrier, makes boas and other articles of ladies' dress of unrivalled beauty.

Our omnivorous ancestors appear to have been great eaters of swans. Amongst other dishes at a feast in the reign of Edward IV., mention is made of "*four hundred swans*." Those said

* *Glyceria fluitans* and *G. aquatica*.—These grasses, especially the former, are of a succulent nourishing quality. The seeds of the former are gathered abundantly in Holland, and used in many parts of Europe as food.

ancestors must have had marvellous capacious stomachs ; for at the same feast there was the like number of herons, besides endless other little delicacies, such as “two thousand pigs ;” the last entrées mentioned being “twelve porpoises and seals,” these probably being reserved to the last as a *bonnebouche*. Truly, the tables must have groaned, *literally*, not *figuratively*, under the burden of the good things laid upon them.

The wild swans, on their first arrival, as I before remarked, are not nearly so wild as subsequent ill-treatment renders them, and I never found much difficulty in procuring a brace, or more, early in the season. Awaiting their arrival at a feeding-place is generally the surest way of getting a shot, or by way-laying them in their passage from one loch to another. On a windy day I have got at them, where the situation has been favourable, by dint of creeping up through bog and ditch. In rough weather they are not so ready to take wing, and with good management may be driven from one end of a loch to the other without quitting the water.

October 18 (1847).—Flocks of starlings.

The starling (*Sturnus vulgaris*) is a constant inhabitant of Moray. It breeds in the old trees about Gordonston, and sometimes about Elgin Cathedral and other old buildings in the district. Early in the autumn they collect in immense flocks. In October and November clouds of starlings frequently roost in the reeds of Loch Spynie ; as the dusk of evening comes on they wheel to and fro, sometimes settling on, and again rising from the reeds, till at last having arranged themselves to their satisfaction they remain quiet for the night. I was amused one evening by watching the attempts of a merlin to catch one out of an immense flock of starlings. The hawk appeared to have fixed his eye on one particular bird, and endeavoured to single it out from the rest. The pursued starling, however, whenever his pursuer was near overtaking it, dashed into the middle of the flock, when all its companions, to the number of many hundreds, closed round it in the air, forming a perfectly compact

body like a solid mass, every bird uttering a loud scream simultaneously. In this manner they completely puzzled and beat off the hawk. The starling becomes very tame and familiar in confinement, and learns both to whistle tunes and also to utter words, and even shout sometimes with exactness and with a most human like voice. I have seen an old hen starling which was caught with birdlime, along with her young ones, bring up her brood in a cage as carefully as if at large. The food of the starling consists principally of caterpillars, grubs, etc.; but it also eats fruit. In confinement it appears to be fonder of raw meat than anything else. The colour of the whole bird is dark, approaching to black, but beautifully glossed with purple copper colour, etc., and each feather has a buff-coloured spot. The bill is yellow during the summer and spring, but becomes of a dark-brown in the winter. The female resembles the male, but is less bright in her plumage. The young birds are of a plain brown for the first year. The egg is of a pale delicate blue colour.

Oct. 13 (1849).—I have not been in the way of getting much lately, but yesterday a beautiful spotted crake and four cross-bills—male and female and two young—were taken. I see in the loch scaup, pochard, and pintail, widgeon, teal, mallard, and golden eye, etc.

The spotted crake (*Ortygometra porzana*) is very rare, and indeed were it otherwise, its shy and retired habits would prevent its being often seen. The only place where I have seen it killed is in Spynie, and always in the autumn or winter. The bill is dull yellow, much shorter than that of the water rail, and straight. The general colour of the plumage is olive brown. The neck, breast, and lower parts are spotted with white on each feather. The flanks are barred with white, black, and pale brown. The upper parts are beautifully marked with spots of white; in some parts these spots are surrounded with a black margin. The irides are hazel. The legs of a greenish yellow. The whole bird has a very beautifully variegated appearance, and is at once dis-

tinguished from any other bird of the same family. The habits of the spotted crake resemble those of the water rail.

October is the month when the greatest number of widgeon arrive in the bay; and the mallards, also, keep up a constant quacking and calling on the sands. Every evening at sunset, or soon afterwards, the mallards fly to the stubble fields, preferring those where there is the least quantity of grass to cover the scattered grains. The water ouzels now come down to the burns near the sea; and these merry little birds resort to the very same stones year after year. They appear to be regular attendants on the small streams and burns where the trout spawn.

Grouse in October and September feed very much in the stubble fields, and are snared and trapped in great numbers by the shepherds and others, who have small oat fields far up in the hills; they frequently leave some of the sheaves on the ground for the express purpose of catching the grouse. The usual manner is with horse-hair nooses; they put a great number of these snares on each sheaf of corn, and catch dozens of grouse in a morning.

Immediately on the retiring of a flood in the river, great numbers of snipes are seen on the mud and refuse left by the water, feeding busily. Where they come from is difficult to say, as at this season, except on these occasions, we have no great abundance of these birds. Red-shanks, in considerable flocks, follow their example. On the 16th I see redwings in the hedges; fieldfares do not appear until ten days afterwards. The wood-pigeons now fly considerable distances to feed on acorns. In the south of England I have killed wild ducks with their crops nearly bursting with the quantity of acorns they had swallowed. They collect them from the single oak trees standing in grass fields.

From the variety of food found in the crops of wild ducks it is certain these birds must wander far and near, during the night, and often into places where no one would expect to find

them. Though the peewits generally leave us early in October, a flock is sometimes seen at the end of the month.

The proceedings of the common long-tailed field-mouse (*Mus sylvaticus*) are amusing, and indicate perfect foresight of the cold and scarcity of winter. They dig deep holes in the stubble-fields, in which they collect large stores of food, such as grain, acorns, nuts, and even cherry-stones. On the approach of cold winds or rain, they shut themselves up in their underground habitations, closing the aperture completely. The quantity of earth which they dig out and leave at the mouth of their hole in a single night is quite astonishing. At the instigation of the gardener my boys wage war against these little pilferers. By pouring water into the holes the poor mouse is obliged, *nolens volens*, to bolt like a rabbit driven out by a ferret.

Late in the afternoon I constantly see the roe feeding on those clover fields where there is sufficient second growth to attract them. They have now lost their red summer coat, and have put on their beautiful mouse-coloured winter covering, though the hair has not yet acquired its full length. Nothing can be more graceful than the light and agile movements of this animal while nibbling the tender shoots of the bushes and trees on which it feeds. The wild rose and the bramble are amongst its favourite morsels: from the long twigs of these plants it nibbles off leaf by leaf in the most graceful manner imaginable. As the leaves fall from the birch and oak woods the roe quit them, and take to the fir plantations, where they have more quiet and shelter. The foresters accuse these animals of being very destructive to their young oak trees; and fond as I am of them, I am afraid I must admit the accusation is just, as they undoubtedly prefer the topmost shoot of a young oak-tree to almost any other food. Nevertheless, the mischief done to the woods by roe is trifling when compared to that of rabbits. Many an acre is obliged to be replanted owing to their destructive nibbling; and in some of the beautiful woods of Brodie, I saw the fine holly-trees of many years' growth, with stems

of six inches in diameter, killed dead by being barked by rabbits.

The common buzzard (*Buteo vulgaris*) is far less common than it was even a few years ago. Of a greedy and indolent disposition, it is easily trapped, coming to almost any dead animal which may be placed as a bait. It breeds both in rocks and in trees. The eggs, generally four in number, are of a dirty white, slightly spotted. The breadth of the wings is about four feet. It can be easily distinguished from any other hawk of the same size while on wing by its soaring flight, and by the roundness of its wings. In both these respects the buzzard has a great resemblance to the eagle. The plumage of different specimens varies very much both as to the shade of the brown upper parts, and in the quantity of white beneath. Though not destructive to old grouse or partridges during the breeding season, it destroys a great many young birds. Its principal food, however, consists of carrion, or of mice, young rabbits, or leverets, and even of lizards, rats, or any small animal. Though sluggish in its usual habits, sitting very often for many hours together on the same dead branch of a tree, or on some point of rock, the buzzard has a very beautiful flight as it soars at a great height in wide circles, apparently searching the country for some dead animal. Its quickness, too, in finding out any food of this kind is wonderful.

The rough-legged buzzard (*Archibuteo lagopus*). This bird is very rarely seen in this country, indeed I have only seen one specimen, which I believe was killed in Inverness-shire. It is easily distinguished from the common buzzard, by its legs being feathered down to the feet.

I have never seen the honey buzzard (*Pernis apivorus*) in this district, but a hawk was described to me which was seen feeding on a wasp's nest near the river Findhorn, which, by the description, could be nothing but the honey buzzard. No bird varies more as to its plumage than this. The upper parts are brown, more or less mottled, and the under parts white or nearly

so. It is a much smaller bird than the common buzzard. As its name denotes, it feeds much on honey and also on the larvæ of wild bees and wasps, and when these are not to be had, it feeds on insects and small birds, reptiles, etc.

I shot two jack-snipes to-day (13th) and saw others ; it is rather early for their arrival.

October (1849).—The sea gulls of every variety are very numerous, also sandpipers. Peregrine, merlin, sparrow-hawk, kestrel, and hen-harrier daily. I hear of other hawks, but see these.

The kestrel (*Tinnunculus alaudarius*) is a very common hawk, and not only harmless, but of great service both to the farmer and the forester, as it destroys great numbers of mice, which form its principal food. On wing it may be very easily distinguished by its hovering motionless over the fields, a habit which gains it the name of "windhover" in many parts of England. It remains, as it were, suspended in the air with scarcely any perceptible motion of its wings, and this for a considerable time, watching the movements of some unfortunate mouse, and waiting for the right instant to make its stoop. The bird whose manner of hunting most resembles that of the kestrel is the osprey. The osprey hovers in precisely the same manner while watching for trout in the clear streams of the north. The kestrel breeds principally in rocks, but occasionally in trees. The eggs are of the same rich red colour as those of the peregrine and the merlin. It is a very beautifully-marked bird in its mature state. The crown of the head and upper part of the neck is blue gray. The tail is also of the same colour, with a black band near the extremity which is tipped with white. The rump is blue gray also. The upper parts of the body and wings are of a brightish red brown, with angular black spots. The lower parts are rusty white streaked with brown. The legs and cere yellow. The eyes are black and large. The tail is long in proportion to the size of the bird, the wings not reaching to the extremity. The female bird

has her upper parts of a light reddish brown with dark bars. The tail is red brown with black bars. The lower parts resemble those of the male. The young birds have not nearly such bright and clearly marked plumage as the mature birds, their whole plumage being rusty brown with dark streaks. The kestrel, though an elegant and beautiful bird, has not the same compact and powerful appearance as the merlin or any other small hawk.

It is not many years since the kite (*Milvus regalis*) was so common in this and in many other parts of the country as to be quite a scourge to the goodwife, being always a great destroyer of young chickens, young ducks, and such small and weak animals as are incapable of making much resistance. Although so large and powerful looking, the kite has none of the boldness and activity of any of the other hawk tribe in attacking its prey. The flight, however, of this bird is almost unequalled in beauty when it soars in wide circles high in the clear sky, as if sunning itself in the pure air of a higher region. Its wide and beautifully-marked wings and long forked tail give it a peculiarly picturesque appearance on these occasions. Unless, however, driven by the necessity of providing for the hunger of its young, the kite preys only on small weak birds and reptiles, and, more frequently, on carrion of any description, fresh or stale. So little savage and courageous is its disposition, that I allow a tame kite to live amongst tame ducks and poultry, who seem to have no dread of it. When, however, there are young broods about, I do not trust her amongst them. A tame peregrine or even sparrow-hawk would not live in the same kind of neutrality with them for two days without either killing some of the poultry or being killed by them. The kite seems a very sociable bird when tame, and is very fond of being taken notice of, putting down its head like a parrot to be scratched, and altogether seeming to like being talked to and to have companions. It has the peculiarity of uttering its loud and not inharmonious whistle at all hours, even in the night, if it sees a light or hears a person passing. This bird is now very rare, and scarcely ever

seen in this part of the country. Its greedy and unsuspicious nature rendered it an easy victim to gamekeepers and trappers, and it is now nearly extinct. The nest is large, built of long and stout sticks and lined with a variety of substances, such as wool, pieces of cloth, or anything that it may chance to find of a suitable nature. The egg is dirty white, with reddish brown blotches at the larger end. The bird is easily distinguished from any other hawk by its size, and by its long forked tail, of a rich orange colour. The feet and claws are small in proportion to the size of the bird, and have not the same strength and power as those of the peregrine or goshawk. The shape of the head and bill is more like that of an eagle than a hawk.



CHAPTER THE THIRTEENTH.

OCTOBER.—*Part II.*

October 19 (1847).—Swans (*i.e.*, one swan) and numbers of geese appear. I shall be haunted by a swan all my life. I deliberately shot two barrels into one to-day at an easy distance, and—he went to sea—and I lost him, riddled, cut to pieces, etc. etc., but gone!

Most of the hill-bred hawks come down to hunt the fields, which are clear of corn, and also to feed on the plovers, etc., which frequent the shore. I sometimes see the peregrine in pursuit of wild ducks; and to-day I observed one give chase to an old mallard. The pursuit was rather curious, reversing the usual order of things, as the falcon's great object was to keep below the mallard instead of above him; the duck endeavouring all he could to get to the water, in which case he knew, as the hawk did also, that his chance of escape would be the greatest. Once in the water, his own element, by diving and swimming he would soon have baffled his pursuer. I don't know what was the end of the chase; the last I saw of them they were winging their way at a tremendous rate straight across the sea for the opposite coast of Ross. Either the hawk was not willing to strike his prey while over the water, or the mallard had a vigour of wing which enabled him to keep ahead of his murderous enemy.

My tame peregrine, after some years of perfect friendship and alliance with our pet owl, ended in killing and eating her! a piece of ungenerous barbarism which I should not have suspected so fine a bird would have committed. They seemed to have quarrelled over the remains of some bird that was given

them for food. At any rate all that remained of the poor owl was a leg and some of the longer feathers.

The country in its present enclosed state is not so well adapted to the sport of hawking as formerly ; but, as far as relates to the training of the birds, the process is much more simple and easy than is generally supposed. Of course the trainer must take in hand a bird of the proper kind, such as a peregrine, a merlin, or an Iceland or ger falcon. A goshawk is tractable enough ; but has not the same dash and rapid flight as any of the true long-winged falcons.

The first step is to accustom your bird to the hood, without which you can do nothing ; but most hawks allow themselves to be hooded quietly enough, and are then to a great degree under your command, as when hooded you can carry her when and where you like on your hand, and familiarise her to your voice and to being handled.

The next step is to accustom the hawk to feed on the lure, and *only* on the lure, so as to fly directly to it whenever she sees it : indeed, the lure ought only to be shewn when the bird is to feed.

These two points gained, you must proceed to flying the hawk in an open field, substituting a long silken string, or "creance," for the short leathern strap, the "leash," by which you commonly hold her. By taking her out hungry, and by shewing her, when mounted in the air, the lure with food attached to it, you will find that she will swoop at once down to her usual feeding-place, which, as I have said, should be the "lure" only.

After doing this two or three days, if the hawk appears tractable, and not at all shy or wild, take her out when very hungry and let her mount without any "creance ;" and when she is well up in the air, toss down the lure, which until then should be concealed, and ten to one but the hawk will immediately come down upon it with the rapidity of an arrow ; and a more beautiful sight than the swoop of a hawk from a great height I do not know.

To make her kill her game, you must at first let her fly at a pigeon or other bird, with its wings partially cut, so as to ensure her against failure at the commencement. After she has killed two or three birds in this way, she will probably kill any bird you may fly her at in a favourable country. But in this fine old sport the mere killing the game is almost a minor consideration. The flight, the soaring, and the rapid detection of, and descent upon, the lure, are in themselves most interesting and beautiful.

I am not sufficiently skilled in the science, even if I had time and space, to attempt technically to describe or make others understand all that is required to constitute an accomplished falconer. The moulting of the falcons, their keeping, feeding, and training, must all be perfectly understood and carefully attended to ; and although almost any person who has his time at his command may manage to keep a single hawk in good training and obedience, yet to carry out the amusement to any degree of perfection, a professed and skilful falconer must be engaged, whose sole and entire employment should be to attend to the health and education of the birds.

The training of falcons is much facilitated by the natural disposition of the bird, which is confiding and fearless ; and these qualifications, assisted by the keen sense of hunger, render their taming and education far more easy than would at first be supposed.

Next to the peregrine the merlin is the best hawk to train, being equally familiar and fearless ; and, although of so small a size, it has courage enough to dash fearlessly when launched from the hand at whatever bird it may see on wing. A merlin belonging to a friend of mine would fiercely assail a blackcock. This hawk, too, is so beautiful and so finely formed, that a prettier pet cannot be found ; and when once a hawk is accustomed to the hood, the trouble of keeping her is very little.

The goshawk, although a fine handsome bird, as has already been said, has not the speed of any of the long-winged hawks,

but she flies well at rabbits. I am told that the manner in which this hawk kills a rabbit, by breaking its skull at a single blow, is something marvellous.

The goshawk (*Astur palumbarius*) is now nearly extinct in this country. A few years ago it bred regularly in the forest of Darnaway, and it may still do so. It also breeds in the forest of Glenmore, near Grantown, on the Spey. The female is a large and very powerful bird, with a peculiarly keen and cruel looking eye. The length of a mature bird is about two feet; the upper parts of an ash-coloured brown, with a white streak over the eye; the lower parts are white, thickly marked with cross bars of brown; there is a great difference between the male and female as to size, the latter being much larger and heavier than the former; the nest is large, and placed in a tree; the eggs are white, with a few reddish brown spots. The irides of the goshawk vary like those of the sparrow-hawk, according to the age of the bird, being of a gray pearl colour in the young bird, and gradually changing to a deep yellow. The plumage of the young has a red instead of a blue shade, as in the old bird. The goshawk, like other short-winged hawks, seems to catch his flying prey more by surprise than by rapidity of flight; gliding quickly through the cover, it suddenly pounces on partridge, pheasant, or wood-pigeon, and seldom hunts in the open country excepting for young hares and rabbits. It is rather a favourite with some falconers, and is flown with great success at rabbits and even at hares. The former are killed by it with great ease, and if the hawk strikes a hare towards the shoulder, she appears quite able to stop its course. When flown at birds, if unsuccessful in its first dash, the goshawk is apt to perch on the nearest tree or hedge, and there to remain patiently as if expecting the re-appearance of its prey. This habit, and its less interesting manner of flight, renders it less a favourite with myself than the peregrine. The temper of the trained goshawk, too, is said to be more capricious and changeable, and to require much humouring. Our ancestors, who understood hawking far better than we

do, had the same opinion of the goshawk, and I find in an old book on the subject the remark that "she is very choice and dainty, and requires to have a nice hand kept over her." The same work remarks the habit of a goshawk of taking to a tree when disappointed in her first flight. This kind of hawk, however, seems to have been much used for all sorts of game, and particularly for the larger kinds, such as the wild goose, etc.

But I am wandering into a subject of which I know too little from personal experience to render my remarks of any value ; and will only recommend those of my readers who possess time and energy to procure a peregrine falcon in good health and perfect plumage (the latter point is most important), and then, with some treatise on hawking in one hand, try if he cannot soon train the hawk which sits hooded on his other. With a fair share of temper, patience, and careful observation, he will be sure to succeed.

At this season the osprey is sometimes seen soaring, with its kestrel-like flight, along the course of the river. I occasionally see one hovering over the lower pools ; but, in general, this bird is seen here only *in transitu* from one side of the country to the other. The golden eagle, too, passes on his way at this season from north to south, frequently attended by a rabble rout of gray crows, who, when they have pursued the kingly bird for a certain distance, give up the chase, which is immediately taken up by a fresh band, who in their turn pass him over to new assailants. It would appear that each set follows him as long as he is within their own especial district, like country constables passing on a sturdy vagrant from one parish to another.

Oct. 27 (1847).—The golden plovers collect in great flocks on the banks of the river to enjoy the morning sun. They are now in excellent condition.

The Bohemian waxwing or chatterer (*Ampelis garrulus*) visits us at irregular and at long intervals. When it does appear, it is usually in considerable numbers, not in large flocks, but widely scattered. They feed on the berries of the hawthorn, mountain

ash, and similar fruits. While flying from tree to tree, or perched on a topmost bough, they frequently utter a peculiar though not loud note, which at once strikes on the ear of the ornithologist as the cry of a strange bird. They are not at all shy, and fall an easy prey to the gunner. The name of waxwing indicates this beautiful little bird more decisively than that of chatterer, the most striking peculiarity in the bird being the small bright red appendages to their secondaries, giving the points of these feathers the appearance of having been dipped in sealing-wax. The substance is, however, more like horn. The head is ornamented with a crest of rather long pendant feathers. The upper parts of the plumage are of soft reddish brown; the throat is black, and a streak of the same colour passes above and through the eyes, which are large and black. The tail is black, each feather tipped with yellow. On the wings is a band of white, and some of the long wing feathers are tipped with pale yellow or straw colour. The lower parts of the bird are ash brown, inclining to purple. The feet are black and strong. The number of feathers that are tipped with red is irregular, varying in the specimens which I have seen from six to eight. The plumage of the specimens also varies considerably in length of crest, shade of colouring, etc. In all, however, there is the same beautiful appearance.

In this country the pheasant (*Phasianus colchicus*) is rare, excepting in places where they are preserved from poachers, and fed during the winter. If the latter is not attended to, in consequence of their wandering habits they are apt to stray far from home, and to fall a prey to poachers, etc. The pheasant eats all sorts of food, grain, insects, roots, and even carrion. Though destructive to crops, where too numerous, the pheasant is of some service in scratching up and eating great numbers of grubs and caterpillars, amongst which it is said to be particularly fond of the wireworm, one of the greatest plagues that the farmer is subject to, unless kept down by rooks, pheasants, etc. Acorns, beech-mast, etc., are also much sought after by the pheasant. Being a valu-

able and easy prey to night-poachers where not sufficiently protected, they are soon destroyed. They appear to roost upon the barest and most transparent tree in the wood ; and as if this was not sufficient, on retiring to roost the cock crows, and the hen utters a low but distinct cry which at once points out the part of the wood where they are to be found. During the night they are easily seen from below, and can easily be shot or "smoked." The latter operation is performed by means of brimstone burnt in an ingeniously made box, with a tube which directs the smoke to the head of the bird and soon suffocates it sufficiently to cause it to drop senseless from the tree. These and many other means are made use of to entrap the pheasant, besides the more legitimate manner of shooting. The pheasant will breed without much hesitation with the common fowl, more particularly if brought up with pullets without seeing any of their own species. The mule bird, however, is inferior in beauty and proportions to both its parents. I have also seen mules between the pheasant and black game. The rich brilliancy of the pheasant's plumage renders him certainly the handsomest of all our birds. When quiet and undisturbed he will soon become familiar, feeding boldly about the house door, and forming a great ornament and addition to the beauty of the garden, more particularly during the spring, when, with erect crest and comb, he struts and crows at all hours of the day, spreading his tail and quivering his wings in the most fantastic manner. When reared under a hen, though delicate for the first few days, if allowed plenty of room and liberty, and variety of food, they soon become strong and hardy. They are very pugnacious, and not only fight amongst themselves, but also attack and drive away common fowls who may intrude on their domain. The spur of a pheasant is short and blunt for the first year, but gradually increases in length and sharpness every succeeding year of his life. White and pied varieties are not uncommon in numerous stocked preserves, but no variety is equal in beauty to the bird in its own proper plumage. The most curious change of plum-

age to which they are subject is that of the "mule," or what is so called. This change appears, however, to be that of an old hen taking on herself the feathers and appearance of the male bird, with the exception of the spurs and comb. I have seen and killed "mules" in many varieties of plumage, from that of a hen with but few marks of the male, to a bird having the entire plumage of, but less bright and smaller than the male. The ring-necked pheasant is sometimes looked on as a distinct species, but it often happens that the same nest produces birds both with and without rings. There is, however, a variety which always has a ring, and the plumage of which is rather different from that of the pheasant more commonly killed. The principal difference is that the plumage of the ring-necked pheasant has a greater tendency to green on the head and the rump, and is altogether lighter. The two varieties, however, are now so completely intermixed that there can be no distinct line drawn between the two. The pheasant builds its nest, or rather lays its eggs on the ground, frequently under cut and dried bushes, amongst long grass, etc., and lays from ten to twelve eggs, sometimes more. If the newly-laid egg is taken regularly out, leaving only one egg in the nest, the pheasant will continue laying for four or five weeks. They sit about twenty-eight days. The mother is very careful of her young when first hatched, and I have seen her fly both at dog and man in their protection as boldly as a domestic fowl.

Oct. 30 (1847).—Rennie shot at five swans, an easy shot, in the water, all sitting with their heads like this, but did not hurt one, much less kill one. I fancy they went off to Spynie.



CHAPTER THE FOURTEENTH.

OCTOBER.—Part III.

CHARMING to every sense is the first return of spring : but quite as enjoyable is a fine dry autumn day, and far more invigorating is the first frosty morning than the breath of the most balmy spring breeze that ever gave life to bird or butterfly. In this part of the island, too, spring is at best but a capricious and uncertain beauty, and in the course of four-and-twenty hours one is burnt by an almost tropical sun, and cut in twain by an east wind which seems to have been born and bred in the heart of an iceberg.

Not so in autumn, or at any rate during the early part of it. In October, the equinox being tolerably well over, and the more severe frosts of winter not yet set in, nothing can exceed the exhilarating feeling which comes with every breeze. How beautiful is the rising of the sun !—bright and red, he casts a splendour of colour, in every gradation of light and shade, on the rugged mountains of the west, whose summits already capped with snow have the hue and refulgence of enormous opals : the sun, too, rises at a proper gentlemanlike hour, so as to give every one a chance of admiring him on his first appearance, instead of hurrying into existence too early for most of the world to witness his young beauties.

From my earliest days I rejoiced more in autumn than in any other season. “*Pomifer Autumnus*” calls forth in the schoolboy’s mind a remembrance of apples and fruit, ripe and ruddy. In later years autumn (and October is undoubtedly the prime month of that season) fills us with thankfulness for the

abundance and variety of the productions of the earth. As I wander now in the wilds and woods, by river and glade, on every side the changing foliage displays an endless variety of beautiful colours. Every thicket and grove has its rich mixture of emerald green, bright brown, crimson and gold.

Every day too has its interest in the eyes of the dweller on this coast, for the arrivals and departures of different birds are unintermitting. An infinite variety of wild-fowl come over from the north and north-east, while our summer visitants, such as the landrail, cuckoo, swallow, and most of the insect-eating birds, disappear. One of my most favourite walks is along the shore, beginning at the mouth of the river and following the edge of the bay till I reach the open firth; then, after continuing along the beach for three or four miles, I return through the wild uncultivated ground which divides the sea-shore from the arable lands. At this season the variety of birds which are to be seen in the course of this walk is astonishing. Starting from home soon after sunrise, with a biscuit in my pocket, my gun or rifle on my arm, and my constant canine companion with me, I am independent for the day. Bright and bracing is the autumn morning; the robin sings joyously and fearlessly from the topmost twig of some rose-bush, as I pass through the garden, while the thrushes and blackbirds are busily employed in turning up the leaves which already begin to strew the walks as they search in conscious security for the gray snails, repaying us for the strawberries and cherries they have robbed us of; and welcome are they to their share of fruit in the season of plenty.

The partridges as I pass through the field seem aware that I am not bent on slaughter, but on a quiet walk of observation; and instead of rising and flying off as I pass them, simply lower their heads till I am beyond them, and then begin feeding again on the stubbles.

From the pools at the end of the river a brace or two of teal and snipes, or perhaps of mallards rise, and probably one or two

are bagged, as I make no scruple of shooting these birds of passage when they give me an opportunity.

Looking quietly over the bank of the river, I see a couple of geosanders fishing busily at the tail of a pool. They are not worth eating, and I do not just now want a specimen; so after watching them for a short time, as they fish for small-trout, I walk on, leaving them unmolested. If, however, I shew any portion of my figure above the bank, their quick eye detects me, and after gazing for half a minute with erect neck, they fly off; at first flapping the surface of the water, or almost running along it; and then gradually rising, wend their way to a few pools higher up the river, where alighting they re-commence their fishing.

The golden-eye duck and the morillon also are frequently seen diving for shell-fish and weed in the deep quiet pools, but never fishing in the shallow parts of the river like the geosander.

The geosander (*Mergus merganser*) is a large and handsome bird, but it is not of frequent occurrence here in the adult state. It frequents both fresh water and salt water lochs. Its food is wholly fish, and its deeply serrated bill, with the teeth sloping inwards, gives it great capability both of catching and holding its slippery prey. It is easily seen how impossible it must be for a fish, once caught, to escape. The finger is easily drawn along with the grain of the teeth, that is, into the bird's mouth; but if you endeavour to withdraw it without care, every tooth enters it. Like all fish-eating birds, the geosander dives with great rapidity, and remains under the water for a considerable time. It hunts a great deal towards the tail of the streams catching the small trout which lie in these places. It begins its search at the very end of the stream, where there is scarcely water to cover it, and hunting carefully along the gravelly bottom, soon finds its prey. The weight of an adult geosander is fully four pounds. The male is a very beautiful bird. The most distinguishing part of the plumage is its delicate cream-

coloured breast. This colour, however, fades soon after death. The crest on the head is large and thick, though not very long, and of a glossy green black. The plumage altogether is marked decidedly with black and white. The legs and feet are of a bright red. The bill is also red, with a black nail, and strongly hooked at the point. The plumage of the female is very different. The head, throat, and crest are of a light chestnut colour. The neck and breast white, slightly marked with gray. The lower parts white, tinged with yellow or cream colour. The upper parts are all ash coloured, with a broad white band on the wing. The legs, feet, and bill are of a duller red than those of the male. The young male resembles the female. The goosander breeds in the northern parts of Scotland. The egg is white, with a shade of buff colour. The nest is placed under large stones, or amongst rank herbage near the water.

The peewits do not leave us till quite the end of October, and during most of the month are in immense numbers on the sands near the mouth of the river. In the dusk of the evening they, as well as the golden plover, leave the sands, and take to the fields in search of worms and snails, generally frequenting the ploughed land or the grass-fields. As I pass along the shore of the bay, large flocks of widgeon fly to and fro as the ebb-tide leaves uncovered the small grassy island and banks. Unlike the mallard and teal, both which are night-feeding birds, the widgeon feeds at any hour of the day or night indiscriminately, not waiting for the dusk to commence his search for food, but grazing like geese on the grass whenever he can get at it. Although towards the end of winter the shyest of all water-fowl, the widgeon, at this season, owing to their not having been persecuted and fired at, may be easily approached, and with a little care may be closely watched as they swim to and fro from bank to bank; sometimes landing, and at other times cropping the grass as they swim along the edge. If a pair of mallards is amongst the flock, the drake's green head is soon seen to rise up above the rest, as his watchfulness is seldom long deceived;

with low quacking he warns his mate, and the two then rise, giving an alarm to the widgeon. The latter, after one or two rapid wheels in the air, return to their feeding-ground, but the mallards fly off to a considerable distance before they stop. 'Tis as well to make the widgeon pay tribute, so creeping to the nearest part of the bank I wait till a flock has approached within shot and in close rank, and giving them both barrels, four or five drop. If any are winged my dog has a tolerably hard chase; for no bird dives more quickly than the widgeon; and they invariably make directly for the deep water, taking long dives, and only shewing the top of their head when they are obliged to come up to breathe. Both male and female have the same sober plumage at this season; nor are the drakes in full beauty till January. I shot a brace of widgeon on the 8th of September this year, which is a month before their usual time of arrival. A flock of eight passed over my head, nearly a quarter of a mile from the sea, and I killed two of them—one apparently a young, and the other an old bird. I am inclined to think that they had been hatched in this part of the country. Although they leave us regularly in the spring, I have been told by an old poacher that a pair or two, probably wounded birds, remain about some of the unfrequented lochs and breed, and he says that he has occasionally seen widgeon in summer in one or two places in the neighbourhood; but this is rare. As my informant has a *very accurate* acquaintance with most birds, I believe his account to be correct. The widgeon that I saw on the 8th of September had very much the appearance of a brood which had been hatched near; one of the birds not having arrived at that fulness and hardness of plumage that would enable it to have made a long aerial voyage. In Sutherland they breed every year.

I have a long walk before me, and bright as an October day is, the sun does not give us many hours of his company, but hurries to hide his glorious head behind the snowy peaks of Inverness-shire.

In crossing the sands of the bay to the neck of sandy ground that divides it from the main sea, there are many runs of water to be waded, some caused by the river itself, which branches out into numerous small streams which intersect the sands, and some made by two good-sized brooks which empty themselves into the bay. In all these streams there are innumerable flounders, large and small, which dart as quick as lightning from under your feet. Their chief motive power seems to lie in their broad tails, with which they propel themselves along at a wonderful rate; then, suddenly stopping, they in an instant bury themselves in the sand; and it is only a very sharp eye that can detect the exact spot where they are by observing their outline faintly marked on the sand in which they are ensconced: sometimes also their two prominent eyes may be discovered in addition to their outline.

It is a favourite amusement with my boys in the summer to hunt and spear the flounders which remain at low water in the pools and runs of water in the bay. On a calm day, by wading to where the water is a foot or two in depth, they kill, with the assistance of a long light spear, a basketful of good-sized fish.

When a flounder is taken out of the water and laid on the moist sands, by a peculiar lateral motion of his fins he buries himself as quickly as if still in his own element.

The large gulls keep up a system of surveillance over all the calm pools at low water, hovering over them, and pouncing down like hawks on any fish which may be left in them. As the tide ebbs, numbers of herons, also, come down to the water's edge, and keeping up step by step with the receding tide, watch for any fish or marine animal that may suit their appetite. It is amusing to observe these birds as they stride slowly and deliberately in knee-deep water, with necks outstretched, intent on their prey, their gray shadowy figures looking more like withered sticks than living creatures.

As for curlews, peewits, sand-pipers, *et id genus omne*, their

numbers in the bay are countless. Regularly as the tide begins to ebb do thousands of these birds leave the higher banks of sand and shingle on which they have been resting, and betake themselves to the wet sands in search of their food ; and immense must be the supply which every tide throws up, or leaves exposed, to afford provision to them all. Small shell-fish, shrimps, sea-worms, and other insects, form this wondrous abundance. Every bird, too, out of those countless flocks is not only in good order, but is covered with fat, shewing how well the supply is proportioned to the demand : indeed, in the case of all wild birds it is observable that they are invariably plump and well-conditioned, unless prevented by some wound or injury from foraging for themselves.

On the mussel scalps are immense flocks of oyster-catchers, brilliant with their black and white plumage, and bright red bill, and a truly formidable weapon must that bill be to mussel or cockle ; it is long and powerful, with a sharp point as hard as ivory, which driven in by the full strength of the bird's head and neck, must penetrate like a wedge into the shell of the strongest shell-fish found on these shores.

Beautiful, surpassingly beautiful, is the view before me, as I rest myself on a height of the sand-hills facing towards the north. The bright and calm sea close at hand, and the variously-shaped and variously-coloured cliffs and rocks of Cromarty and Ross, at a distance in reality of twelve or fifteen miles, but which, as the sun shines full upon them, appear to be very much nearer, and all these are backed by mountains of every form and outline, but of a uniform deep blue tipped with white peaks. The sea as smooth as a mirror, except where some sea-fowl suddenly splashes down into the water, making a few silvery circles, which soon disappear. Every here and there is a small flock of the long-tailed duck, diving and sporting in the sea, and uttering their strange but musical cry as they chase each other, swimming rapidly in small circles or taking short flights close above the surface ; the whole flock dropping all at once into

the water as if shot, not alighting gradually like the mallard and other ducks.

The heavy but handsome velvet ducks (*Oidemia fusca*) ride quietly on the sea in small companies, at the distance of about two hundred yards from the shore, apparently keeping over some ridge of sand or other feeding-ground, down to which they are continually diving. These birds drift along with the tide till it has carried them beyond the place where they feed ; then they rise, and fly back for some distance, looking more like blackcocks than ducks, and dropping again into the water, they continue their diving till the tide has drifted them beyond the end of the feeding-ground ; and then the same again and again.

Though in general appearance not unlike the velvet duck, the scoter (*Oidemia nigra*) is smaller and not so plump in appearance. The whole plumage is black without the white band on the wings. The bill is black, with a considerable protuberance at the base, which is marked with a yellow stripe extending nearly to the tip. Legs and feet are brownish black. This bird is not so common in the firth as the velvet scoter, and seems to leave us during the depth of winter, betaking itself southwards. I never heard of its being seen inland, and it appears to live wholly on small shell fish.

This bird frequents the Moray Firth in considerable numbers. It arrives early and leaves us late. Towards the spring they seem restlessly active, and on a fine day may be seen playing for hours together on the calm sea. When flying, the velvet scoter has very much the appearance of a black cock. Their flight is very similar, and the whole plumage is of a fine glossy black, with the exception of a small white spot under each eye and a white bar on the wing. The head is round and large. The bill is broad and of a deep orange, with a black knob at the base. The legs and toes are crimson, but the membrane of the feet is black. The feet are large. The velvet duck never approaches very near to the shore in this county, but seems to live wholly on the water, where it floats high, and appears to pay little

regard to wind and waves, swimming at its ease in the roughest water, occasionally taking short flights. It dives with great celerity, and feeds on small shell-fish, etc., which it seeks at the bottom of the sea. When fishing, as the tide drifts them beyond the fishing-ground, these birds seem to take a short flight in order to recommence their search over the same part of the bottom. The female is not of so glossy a black as the male, and the lower part of her plumage is slightly marked with white. Her bill is of a dark colour, too, instead of the bright hue of the male, nor are her legs and feet of so clear a red. The flesh is rank and fishy, like that of all ducks which feed on shell fish.

The rabbits which inhabit these sand-hills are certainly larger and heavier than those living in the more cultivated country, though their food must consist almost entirely of dry bent, with the variety of a little sea-weed and the furze bushes, which they eat into numerous shapes, like footstools, ottomans, etc.

Foxes, almost as tall and powerful as greyhounds, frequent this desert region ; and their fresh tracks are seen after every tide close to the sea-shore, whither they have been in search of cast-up fish, wounded wild fowl, and such like.

I never pass over these sand-hills without endeavouring to raise some new theory respecting their origin, and what was the state of the country which they now cover. That beneath the accumulation of sand there has once been a range of fertile fields cannot be doubted, as in different places are seen furrows and other well-defined traces of cultivated land ; yet no account exists of the destruction of these fields by the inroad of the sand ; evidently the change was accomplished suddenly. In many parts of this sandy region there are distinct marks of rushing waters ; ridges of both sand and shingle are cast up in a manner which could only have been effected by some tremendous rush of water ; and strange pyramids of stones also are heaped up in several places, to all appearance by the same agency.

Few remains of antiquity have ever been found here ; indeed, these sands are rarely trodden by any foot save that of some poacher in search of rabbits. I have, however, seen a most curious bracelet-like ornament which was found here. It is made of fine bronze, in the shape of a snake, which, it has been supposed, had a head at each extremity, formed of some precious stone ; these, however, are lost, the fastenings having corroded. In shape this relic appeared to me to resemble one of the bands which bound together the fasces carried by a Roman lictor. On further examination it has, I believe, been ascertained that the bronze must have encircled some ornament or weapon of wood, which has rotted away, leaving nothing but the more durable metal. The bracelet is now in the Altyre collection, having been presented to the late Lady Gordon Cumming by John Hay Mackenzie, Esq. of Cromarty.

It has twice happened to me to find human skeletons, or rather the remains of skeletons, lying on the sand, laid bare by some drifting wind, or half disinterred by the subterraneous proceedings of the rabbits. In both cases the remains were evidently of great antiquity, but had been preserved by the dry sand.

Those curiously carved pieces of flint called elf-arrows are not uncommon in some parts of the sand-hills.

On one part of the sands, which forms a peninsula at low water, but an island when it is high, I perhaps discover two or three seals (*Phoca vitulina*) lying. Clumsy-looking as they are, at the slightest alarm they scuffle off with great rapidity into the water. Once there they feel secure, and rising at a short distance from the shore, they take a good look at the intruder on their domain. Ugly and misshapen as a seal appears on land, he is when in the water by no means an unsightly animal ; and he floats and dives with a quiet rapidity which appears marvellous to the looker-on. You see a seal's head appear above the water ; and you sit down half concealed, with ready rifle, to wait his reappearance. In a minute or two you are startled

by its rising quietly in quite a different direction ; and after gazing intently at you for a few moments with its dark, mild eyes, the sleek, shining head disappears again below the surface without making a ripple on the water, just as you have screwed yourself round, and are about to touch the trigger of your rifle, leaving you almost in doubt as to whether it is a seal or a mermaid. The Highlanders, however, are by no means prepossessed in favour of the good looks of a seal, or "sealgh," as they pronounce the word. "You are nothing but a sealgh" is a term of reproach which, when given by one fishwoman to another, is considered the direst insult, and a climax to every known term of abuse.

It is curious to observe the seals resting on some shallow, with only their heads above the water, and their noses elongated into a proboscis-like shape. They will frequently lie in this manner for hours together, until the return of the tide either floats them off their resting-place, or some other cause induces them to shift their quarters. The greatest drawback in most situations to shooting seals is the difficulty of getting the animal when killed. Tenacious of life to a surprising degree, a seal, unless shot through the head, escapes to the water, however severely wounded he may be, and, sinking to the bottom, is lost to the sportsman. When shot through the head, he struggles for perhaps a minute on the surface, and then sinks like a stone to the bottom. A strong courageous retriever sometimes succeeds in towing a dead seal ashore, if he can reach him before he sinks, and has the good luck or judgment to take hold of one of the animal's feet, or "flippers," the only part which the dog can get into his mouth.

A seal has a very acute scent, and can never be approached from the windward. I conceive that their eyesight is less perfect ; at any rate they are endowed with a certain dangerous curiosity which makes them approach and reconnoitre any object which they may have seen at a little distance, and do not quite understand. I have seen a seal swim up to within

twenty yards of a dog on the shore, for the purpose apparently of examining him, as an unknown animal. Music, too, or any uncommon or loud noise attracts them, and they will follow for a considerable distance the course of a boat in which any loud musical instrument is played, putting up their heads, and listening with great eagerness to the unknown strains. I have even seen them approach boldly to the shore, where a bagpiper was playing, and continue to swim off and on at a hundred yards' distance.

Notwithstanding their wariness and the difficulty of capturing them, seals are gradually diminishing in number, and will soon disappear from our coasts. This is owing chiefly to the constant warfare carried on against them by the salmon fishers, who either destroy them or frighten them away from their fishing stations.

On the neck of land at which we have now arrived there is a hut inhabited during the season by a couple of salmon fishers, whose business it is to attend to the stake-net, which stretches out from near their hut into the sea. A lonely life these men must lead, from March to September, varied only by visits from or to their comrades, who are stationed at the dépôt of ice at Findhorn, where the fish caught are deposited till a sufficient quantity is ready to load one of their quick-sailing vessels for London. But if their life is lonely it is not idle, as the exposed situation of their nets renders them liable to constant injury from wind and sea. At every low tide the men scramble and wade to the end or trap part of the net to take out the fish which have been caught, and to scrape off the net the quantity of sea-weed that has adhered to it during the last tide. Although they do not always find salmon, they are seldom so unlucky as not to catch a number of goodly-sized flounders, which fall to the share of the fishermen themselves; and perhaps once or twice in the season a young seal gets entangled and puzzled in the windings of the net, and is drowned in it. More frequently, however, the twine is damaged and torn by the larger seals, who are too strong and cunning to be so easily caught.

Frequently on this barren peninsula I have fallen in with a small colony of field-mice. They are in shape like the common large-headed and short-tailed mouse, *Arvicola riparia*, which is so destructive in gardens, but of a brighter and lighter colour. These little animals must live on the seeds of the bent and on such dead fish as they may fall in with.

The brent goose is not a constant visitor here in the winter. This bird, though very numerous in the Cromarty Firth, does not find in this part of the coast the particular kind of sea-grass on which it feeds. There are generally, however, a small company of these geese about the basin. A few white-fronted geese are constantly here from October to April or May, living either in the lonely mosses near the sea, or about the sands. Of other wild geese we have no large flocks, except during the time of sowing the oats, when bean-geese arrive in great numbers.

This bay, like that of Findhorn, is always swarming with *waders* of every description, from the curlew to the red-shank, and from the smallest kind of sandpiper to the old man we see yonder, who is wading mid-leg deep in the tide, keeping even pace with the water as it flows in to fill the basin. His occupation was for some time a mystery to me, till approaching him, I saw that he had a singular kind of creel slung to his neck, and a long, clumsy-looking trident in his hand. Walking slowly backwards, but still keeping in two-foot water, with poised weapon and steady eye, he watches for the flounders which come in with every tide. When he sees one, down goes his spear; and the unlucky fish is hoisted into the air, and then deposited in the creel.

I waited until, having either filled his basket or being driven to land by the increased depth of the tide, the old man quitted the water. He either had not noticed me, or did not choose to do so before he landed. When I accosted him by asking him what luck he had had, I got at first rather a grunt than an answer, for he seemed in no communicative mood; but having refreshed himself by a spoonful of snuff, which he

crammed into his nose with a little wooden ladle, he told me that he "had na got muckle *vennison* the day," adding that he "did na ken what had driven the *beasts* out of the bay of late;" venison, or, as he pronounced it, "ven-ni-son," meaning in this country any eatable creature, fish, flesh, or fowl. The old fellow seemed of a most bilious and irritable temperament; and I believe had I not won him over by dint of whisky and fair words, he would have laid his bad success in flounder catching to my shooting wild fowl in the bay. As it was, he gradually became tolerably gracious, and told me many marvellous stories of the good old time, when salmon fishers were fewer and seals more plentiful; so much so, that, according to his account, every tide left numbers of these now rare animals in the pools of water in the bay; and a "puir man wha wanted a drop oil or bit seal-skin had only to go down at low water to the pools, and he could get a sealgh as sune as I can get a fluke in these days." Since this colloquy I and the old flounder fisher have always been on tolerable terms.

The sea in this bay, as well as in other similar ones on the coast, runs in so rapidly that unless one keeps a good look-out, there is a chance of being surrounded by the water, and detained till an hour or two after the tide begins to ebb again, which in these short autumn days would be inconvenient, as I am now at least six miles from home; a great part of which distance is over the roughest moss and heather that I know; full, too, of concealed holes, treacherously covered over with vegetation.

The first flock of swans which I have seen this season are just arriving in a long, undulating line. As they come over the sands where they will probably rest for the night, the whole company sets up a simultaneous concert of trumpet-like cries; and after one or two wheels round the place, light down on the sand, and immediately commence pluming themselves and putting their feathers in order, after their long and weary flight from the wild morasses of the north. After a short dressing of

feathers and resting a few minutes, the whole beautiful flock stretch their wings again, and rise gradually into the air, but to no great height, their pinions sounding loud as they flap along the shallow water before getting well on wing. They then fly off, led by instinct or the experience of former years, to where a small stream runs into the bay, and where its waters have not yet mingled with the salt sea. There they alight, and drink and splash about to their hearts' content. This done, they waddle out of the stream, and after a little stretching of wings and arranging of plumage, standing in a long row, dispose themselves to rest, every bird with head and long neck laid on its back, with the exception of one unfortunate individual, who by a well-understood arrangement stands with erect neck and watchful eye to guard his sleeping companions. They have, however, a proper sense of justice, and relieve guard regularly, like a well-disciplined garrison. I would willingly disturb their rest with a charge of swan-shot, could I get within range, but not being able so to do, I must needs leave the noble-looking birds to rest in peace. When I get up from the place where I was sitting to watch them, the sentinel gives a low cry of alarm, which makes the whole rank lift their heads for a moment ; but seeing that they are out of danger, and that instead of approaching them, I am walking in the contrary direction, they all dispose themselves again to rest, with the exception of their watchful sentry. In the morning, at daybreak, they will all be feeding in the shallow lakes in the neighbourhood, led there by some old bird who has made more than one journey to this country before now. Wistfully my dog watches the snow-white flock ; but the evening is coming on, and we must leave them.

An extraordinary shot was made by Sir Alex. Cumming at a swan lately, which he killed *on the wing*, flying past him, with the rifle, at 140 measured yards. The ball entered at the junction of the neck with the body ; he of course fell stone dead.

A desert of moss, heather, and stunted fir-trees, which takes an hour to walk through, affords little worthy of note, with the

exception of that fine fellow of a fox who, as we pass on, surveys us from a hillock well out of reach. The gray crows flying and croaking over his head first called my attention to him. Nothing is to be seen now but the top of his head and the tips of his ears, as he lowers himself down gradually and quietly the moment he sees me look in his direction. But my dog has got the scent ; and off he goes in a vain pursuit. Tractable and well broken as he is with regard to game, no sooner does he perceive the inciting odour of a fox or otter, than, heedless of call or threat, he is off in pursuit. Look now ! away goes the fox at a quick but easy gallop, through the swamp, with his tail (*Anglice* brush) well up in the air. A fox is always a great dandy about his brush ; and keeps it free from wet and dirt as long as he possibly can : a sure sign of poor Reynard beginning to feel distressed is his brush appearing soiled and blackened. Ah ! the dog has got on his scent again, and begins to press hard on his chase ; but as I well know he has not the slightest chance against the light-heeled fox, who is always in racing condition, whereas the retriever, with his curly coat and good living, will be blown before he has run a mile, I continue my walk. Presently the dog returns panting like a porpoise ; and, conscious of his irregular conduct, before he takes his usual place at my side, stops behind a little while, wagging his tail, and grinning in the most coaxing manner imaginable, till he has examined my face with that skill in physiognomy which all dogs possess ; then seeing that I cannot help smiling at him, he jumps boldly up to me, knowing that he is forgiven.

Occasionally a blackcock flies past us. These birds, a considerable number of which frequent this wild region, sleep every night in the highest and roughest heather they can find, in order to guard against the attacks of the fox, who in his hunting excursions seldom walks over that kind of ground, preferring beaten tracks, or the edges of pools or marshes, along which he can walk unheard and easily, till his acute nose warns him of the vicinity of some prey ; whereas the strong and large heather

in which blackcocks roost cannot be walked over quietly and comfortably by an animal whose legs are so short as a fox's. The gray hens stand a much worse chance. Led by their maternal instinct to build their nests near the edges of the smoother grounds, where their young, when hatched, can run about, they are so much exposed to the attack of the foxes, that scarcely one is left, and before long the breed in this part of the country will be quite worn out.

Up to his knees in a swamp stands a beautiful roebuck, feeding quickly and hungrily on the coarse grasses which grow there; whilst half way up the brae, a doe and her fawn are nibbling the faded leaves of a wild-rose bush. By a little management I could easily get within thirty yards of them, but I prefer watching them a little while with my glass. The buck has got the wind of me now, and starting up, looks quickly round, and then bounds up the steep brae to where the doe and fawn are standing, and after the whole party have halted on the top for a minute to reconnoitre me, they all bound off again into the densest part of the thicket.

As I approach home, and the evening comes on, several small flocks of wild ducks pass with whistling pinion over my head, on their way to some well-known stubble. The barley fields appear to be their favourite feeding ground at this season, probably because there is always more barley left on the ground than any other kind of grain.

The ferryman at the river where I pass tells me that he "is thinking that I have had a long travel, but that I have not got much *ven-ni-son*." In both surmises he is not far wrong, but I have enjoyed my long and rough walk as much—ay, and much more—than I should have done the best battue in Norfolk, or the best day's grouse-shooting in Perthshire.

CHAPTER THE FIFTEENTH.

NOVEMBER.

NOVEMBER, month though it be of cold winds and sleet, is generally ushered in by flocks of that beautiful little bird the snow bunting (*Plectrophanes nivalis*.) For three successive years I have first seen this winter visitor on the 1st of November, which is another instance of the regularity of birds in their migrations. In the first flocks that come there are only a few which are light-coloured, but as the snow and frost increase the white birds become more numerous. I do not know whether they arrive during the night, but I have constantly heard their note after it has been quite dark, the birds being at the time on wing ; and this sometimes occurs several hours after nightfall.

During its stay here its principal resort is the sea-shore, though they are to be seen often both in the stubble and on the hills. They never perch on bushes or trees, but run rapidly on the ground. Like larks the hind claw is of a great length in proportion to the front claws. Their food seems to be the most minute seeds of grasses, and small insects. No two birds in a flock are exactly similar in plumage ; and there are but few strongly marked with white ; occasionally an old male is killed of great whiteness. In these fully plumaged birds, the head, neck, rump, most of the wing-feathers, and all the lower parts, are pure white. The outer three tail-feathers are white, marked at the end with black, the rest black ; the bill is yellow, tipped with black, and legs black ; the rest of the plumage is variously marked with reddish brown ; the greatest number, however, have but little white, being more mottled and shaded with reddish

brown and black. They leave us late, some remaining till the first week of May.

The mountain finch or brambling (*Fringilla montifringilla*). This is a somewhat rare visitor, several years pass without my seeing any of these birds. They perch on trees, and I have seen them more often about beech trees than any other ; but this may be the effect of chance. They resemble the young or female of the snow bunting very much, though at the same time they are easily distinguished by a person well acquainted with these birds, though some authors are of opinion that these and the snow bunting are the same bird in different plumage. The habit of the snow bunting in *never* perching on trees, while the brambling frequently does, sufficiently shews that they are distinct. The shape, too, is different, the brambling is a shorter bird ; they are of a more tawny or reddish colour than the snow bunting ; the breast is a soft dull yellow ; the bill is yellow ; the legs and feet grayish black ; the feathers on the head and sides of the neck are black edged with brown ; the tail is black ; the outer tail feathers edged with white ; rump and lower part of the belly white ; the plumage in different specimens varies very much.

Nov. 5 (1846). A beautiful little blue tomtit has taken up his abode voluntarily in the drawing-room. It would seem that at first he was attracted by the few house flies who at this season crawl slowly about the windows. These he was most active in searching for and catching, inserting his little bill into every corner and crevice, and detecting every fly which had escaped the brush of the housemaid. He soon, however, with increased boldness, came down to pick up crumbs, which the children placed for him close to me upon the table where I am writing, looking up into my face without the least apparent fear. From his activity and perseverance in exterminating flies, this bird appears well worthy of protection.

Nov. 4 (1846).—Several peewits still remaining.

The thrushes, and blackbirds too, earn the favour of the

gardener by their constant destruction of snails, in search of which, at this season, they are all day busily employed in turning over the dead leaves under the garden walls, and at the bottom of the hedges. My experience convinces me that there are few of the common birds whose perseverance in destroying grubs, caterpillars, etc., for at least nine months of the year, does not amply repay the mischief done by them in eating cherries and seeds during the remaining three. It is difficult, however, to persuade the farmer to look on rooks and wood-pigeons as his friends, when he sees them in flocks on the nearly ripe wheat-field. Nevertheless, were he to examine the crops of any of these wild birds, and see what they were filled with during three-fourths of the year, he would find that they fully recompense him for all the grain they devour. Undoubtedly a considerable quantity of newly-sown wheat is eaten by different birds. Sea-gulls, amongst others, seem to swallow the grain indiscriminately with the grubs and worms turned up by the harrows; and large flocks of greenfinches and buntings are busily occupied in searching for whatever corn is not well covered over. The wild ducks, too, come at night to shovel up what remains in the furrows.

This is the season at which partridges migrate from the high grounds to the cultivated fields. Fresh unbroken coveys frequently appear near the mouth of the river: sometimes they come in flocks of twenty or thirty. In damp weather these birds seek the dry and warm ground on the sandy places about the lower islands, and appear entirely to desert the fields except at feeding time.

Nov. 8 (1846).—By the edge of the river are tracks of four otters, two old and two young. They are evidently newly arrived, and will probably remain feeding about the mouth of the river till a flood drives them away. There are two or three small hillocks the size of molehills near the river, to which the otters invariably resort, and it seems that whenever an otter arrives in that part of the river, however great a stranger he may

be, or however long an interval may have elapsed since an otter has visited the hillock, the new comer goes out of the water to examine the place, as if the animal wished to judge by the freshness or staleness of the marks on it what likelihood there may be of any other otters being in the neighbourhood.

Nov. 12.—The water-ouzel enlivens the burn now by its low but sweet note, uttered either while perched on its accustomed stone in the midst of a rapid, or whilst floating with open wings on the surface of a quiet pool—a method of proceeding quite peculiar to this interesting little bird. The salmon fishers wage war to the knife with the water-ouzel ; and, indeed, it is not a little destructive to the spawning beds, although I am inclined to think that it attacks the trout spawn more frequently than that of the salmon.* If so, this bird also does fully as much good as harm ; the most deadly enemy to salmon being the larger burn trout, whose favourite food is, undoubtedly, the ova of the salmon.

Nov. 17.—Young otters are caught now apparently not three weeks old. I have before this fancied that the otter breeds at various seasons, not regularly, like most wild animals.

The trout now betake themselves to every running stream, working their way up the narrowest rills, in order to place their spawn.

When accompanied by her young, the female otter throws aside her usual shyness, and is ready to do stout battle in their behalf. A Highlander of my acquaintance happened to find a couple of young otters in a hollow bank, and having made prisoners of them was carrying them home in triumph in his plaid. The old otter, however, attracted by their cries, left the river, and so determinedly opposed his carrying them away, by placing herself directly in his path, and blowing and hissing like a cat at him, with tail and bristles erect, that the man, although as stout a fellow as ever trod on heather, was glad to give up one of the young ones, and make his escape with the

* See note on water ouzel, page 88, and index, under *Hydrobata Cinclus*.

other while the mother was occupied in assuring herself of the safe condition of the one she had rescued.

When caught young no animal is more easily tamed than the otter ; and it will soon learn to fish for its master. In educating all wild animals, however, it is absolutely necessary that the pupil should live almost constantly with its teacher, so as to become perfectly familiarised with his voice and presence.

Mr. John Cumming of Altyre caught a young otter at the Findhorn one day in spring, about half grown. He thoroughly tamed him, keeping him constantly by him, and in a short time trained him to catch trout, taking sometimes above a dozen in a forenoon out of the small stream near the house. His general food was porridge and milk, which he devoured quite as freely as fish. This most interesting pet was unfortunately killed through the neglect of a keeper after Mr. Cumming went to Ceylon.

Even when young the otter is a most powerful and severe biter, closing its jaws with the strength of a vice on whatever it seizes. Every courageous dog who has once battled with an otter, retains ever afterwards the most eager and violent animosity against the animal. The scent of an otter renders my otherwise most tractable retriever quite uncontrollable. The remembrance of former bites and wounds seems to drive him frantic, and no sooner does he come across the fresh track of one than he throws aside all control, and is off *ventre à terre* in pursuit.

When an otter is caught in a trap, all its companions that may be within hearing of its struggles to escape immediately repair to the spot, and try to assist the captive in escaping. During the daytime the otter lies quietly in some concealed spot, either in a hole excavated under some overhanging bank or root of a tree, or in some hollow place amongst a cairn of stones. Occasionally, however, when surprised by the light of day in a situation where he deems it imprudent to continue his course towards the usual hiding place, he crawls quietly into some convenient drain, or chooses a dry place in a clump of rushes, and there he will lie during the whole day, till the gloom of evening enables him

to continue his journeying, or to commence fishing again. I remember an instance of a groom in Hampshire being startled by an otter jumping from under his wheelbarrow, which he had left leaning against the stable wall close to a stream ; into this the otter had crawled in the morning, and there he would probably have remained till evening, had not the man, having occasion for the barrow, dislodged him by turning it over.

Though the otter is naturally piscivorous, on emergency he will eat flesh or fowl, and is occasionally caught in the traps baited with a pigeon, a piece of rabbit, or whatever else the gamekeeper may make use of in catching other vermin. The trap that holds an otter must, however, have both a powerful spring and be well chained to its peg, with a swivel or two on the chain to prevent the animal breaking it by dint of twisting.

In hunting down the course of a river the otter always keeps the water, gliding in his quiet ghost-like manner down the deep pools, making scarcely a ripple as he floats down, sometimes diving, and, indeed, rarely shewing much of his head above the surface, except when to listen to some distant sound, or to gaze at some doubtful object, he suddenly raises half his length perpendicularly out of the water. In passing the fords he wades down the shallowest place, or if the stream is there very rapid he comes out of the water and follows the bank of the river, moving along in a curious leaping manner. When in pursuit of fish he seems, as far as can be observed, to try to get below his prey, that he may seize it by the throat.

It is not often that an otter commits himself so far as to be found during the day-time in any situation where he can be approached ; but one day in this month I was out for a quiet walk with my retriever, looking at some wide drains and small pools for wild ducks, when suddenly the dog went off nose to the ground, in so eager a manner that I knew nothing but a fox or an otter could have been the cause of his excitement ; and I soon found in a nearly dry open drain the quite recent track of a very large otter. For a long time he would not shew himself,

till suddenly the dog rushed into a thick juniper bush, and the next moment dog and otter were tumbling over each other into a deep black pool. The otter escaped from the dog in the water ; but the hole being only about six feet square, though deep, I took my retriever out by main force, and waited for the water to become clear again. When it did so, I looked for the otter for some time in vain, till at last, having stooped down close to the pool, I was startled by seeing his face within a few inches of my own, his body being almost entirely concealed by the overhanging bank. I tried to make him leave his cover, but in vain ; so I sent the dog in again, who soon found him, and after a short scuffle, the otter left the pool, and went off along a wide but shallow drain, and there the battle began again. The dog, although unable to master the otter, who was one of the largest size, managed to prevent his escape, and at last I ended the contest by a well-applied blow from a piece of railing which I had picked up.

Otter skins, when well dressed by a skilful furrier, make a valuable addition to a lady's winter wardrobe, the under fur being peculiarly soft, silky, and of a rich brown colour.

I am daily more and more convinced that the otter is by no means so great an enemy to salmon as he is supposed to be ; his general food being trout, eels, and flounders ; although of course when a salmon comes in his way, he is sufficiently an epicure not to refuse taking it. An otter seldom kills a salmon without leaving enough of the fish to betray him, as most people who live near salmon rivers know full well ; but the remains of the trout and eels which he kills are not so conspicuous. I am borne out in this opinion by Mr. Young, manager of the Duke of Sutherland's salmon fishings, whose opportunities of observation and acuteness in judging ought to make his favourable opinion of otters equivalent to a verdict of acquittal whenever they are accused of being great salmon destroyers.

The seal, on the contrary, is a constant and most annoy-

ing enemy to the salmon fisher, breaking the stake-nets, and enabling the fish who are already enclosed to escape. Besides which, a seal, hunting along the shore near the nets, drives the salmon out into the deeper water, beyond the reach of the fisherman. The seal is also a much more rapid swimmer than the otter, and I have no doubt that he can take a salmon by actual speed in the open sea, although he cunningly prefers catching his prey with the assistance of the stake-nets, when he has comparatively little trouble.

I have frequently been told that the seal cannot remain under water for more than a quarter of an hour without coming to the surface to breathe. I am, however, confident that this is not the case, and that he can continue for hours under the water when lying undisturbed and at rest. If caught and entangled in a net he is soon exhausted and drowned.

I was assured by a man who was constantly in pursuit of seals that one day, having found a very young one left by its mother on the rocks, near Lossiemouth, he put it into a deep round hole full of water left by the receding tide. For two hours, during which he waited, expecting to see the old female come in with the flow of the tide, the little animal remained, as he expressed it, "like a stone" at the bottom of the water, without moving or coming to the surface to breathe. He then took it out, and found it as well and lively as ever; and on turning it loose into the sea it at once began swimming about with some other young ones.

In a creek of the sea where I sometimes watch for seals, I have seen two or three come in with the flow of the tide. After playing about for a short time, they have disappeared under the water, and have not shewn themselves again till the receding tide has warned them that it was time to leave the place. From the situation they were in, and the calmness of the water, the seals could scarcely have put up their noses to breathe without my having seen them. Apparently they sunk to the bottom in a certain part of the bay, in order to be at rest,

and remained there till the ebb was pretty far advanced, when they reappeared in the same place where I had lost sight of them, perhaps, some hours before. It was a curious and amusing sight to see these great creatures swim up within a few yards of the ambuscade which I had erected close to the narrow entrance where the tide came in to fill the bay. At thirty or forty yards' distance I found it impossible to shoot a seal swimming, if he had seen me and was watching my movements: my best chance always was when the animal, having turned away, presented the broad back of his head as a mark to my rifle. If I arrived in time to do so, I put up some small object on the side of the inlet opposite to where I was concealed. This had the effect of distracting the attention of the animal from his real danger.

A flock of seals playing and fighting on a sandbank is one of the drollest sights which I know in this country. Their uncouth cries and movements are unlike anything else. In the Dornoch Firth and near Tain there are still great numbers of them, and every fine day they are in large flocks on the sandbanks; but on this coast they have been very much thinned off, and scarcely any are killed excepting by myself. My keeper tells me, that when he was a boy, their number was very great, and that the inhabitants of the place could always kill as many as they wanted for oil, and for their skins, picking out the largest, and sparing the smaller ones; but, alas! cheap guns and salmon fisheries have combined to make them scarce. Formerly, also, in the pools left by the sea within the old bar of Findhorn, numbers of seals were left at every ebb of the tide, and the farmers occasionally went down and killed a few to supply themselves with oil for the winter.

Nov. 27.—Any unusual number of wild-fowl in the bay at this season generally prognosticates stormy weather or snow. I saw nearly fifty wild swans swimming and flying between this place and the town of Findhorn; and some large flocks of geese

were passing over to the south. The next day the ground was covered with snow, an unusual occurrence at this season. Of these swans one flock of six established themselves in the fresh-water lakes between this and Nairn, and the rest held on their way to the south. The Icelanders hail the appearance of the wild swan in the same manner as we do that of the cuckoo or swallow ; it being with them the foreteller of spring and genial weather ; whilst here they are connected in our minds with storms and snow-clad fields.

The Loch of Spynie is another established wintering-place of the wild swan. A few years ago great numbers remained both in that loch and in Lochlee all winter. I know of no other fresh-water lakes in this country where they now appear regularly. Near Invergordon numbers of swans feed with other wild-fowl on the sea-grass.

Nov. 28.—The ground, as I anticipated from seeing the swans, is covered with snow.

The frost and snow send all the mallards down from the hill lakes to the bay. I shot a bird exactly answering to Bewick's description of the dun diver, excepting that it was much smaller. Bewick describes his bird as twenty-seven inches in length. This was only twenty inches. It was apparently quite full grown. I shot it whilst it was fishing in a small stream, and the bird had already swallowed twenty-five sticklebacks and one small eel. Its bright red bill is well adapted to hold any fish, however slippery, being supplied with the sharp teeth sloping inwards which are peculiar to birds of this class.

The bird called "Dun Diver" is either the female or young of the merganser or goosander.

The red-breasted merganser (*Mergus serrator*) is a more common visitor than the goosander. It is considerably smaller, but resembles it rather in its general appearance and plumage. The breast, however, has not the same beautiful shade of cream colour, but is of a reddish brown with spots of a darker colour.

The crest is longer in proportion than that of the goosander. The whole plumage does not shew so much white. Both these birds, however, vary very much in their general plumage. The bill is in shape like that of the goosander, and deeply serrated. It is of a more dingy red, as are also the feet. The irides are red. The plumage of the female and young male resembles that of the female goosander. They come in considerable numbers to the solitary sand-banks between the Findhorn and the Nairn both in autumn and at the beginning of spring. During the winter they disperse southwards. They are generally seen singly or in pairs fishing in the same manner as the goosander. The merganser breeds near the margin of small lakes; its nest is generally placed under some shelving bank or loose stone, or is well concealed in the long herbage. The egg has a buff shade. The habits of this bird resemble those of the goosander so much that a description of one may serve for both.

The black-throated diver (*Colymbus arcticus*), though a smaller bird than the great northern diver, is equally beautiful in its plumage. It breeds on Lochindorb; but on no other loch in this district. On the northern lochs they breed very commonly. Though generally only one pair frequents the same loch. Their eggs are two in number, and are invariably placed on some small low island and close to the water edge. During the month of May, on a fine calm evening, I have seen great numbers of these birds in the Bay of Tongue, in Sutherland. The rocks and hill-sides resound with their singular and wild cry, as they seem to be holding a noisy consultation as to their future movements. The cry is most peculiar and startling. I could scarcely persuade my companion, who was not used to these birds, that the sounds did not arise from a number of people shouting and laughing—till I pointed out to him the birds splashing and playing on the calm surface of the beautiful bay. As the evening advanced the divers gradually dispersed, going in pairs, after a few circles in the air, over the bay, in a direct and rapid course, and at a great height over the surrounding moun-

tains, each pair evidently wending their way to some well-known mountain loch, where their breeding quarters were decided upon. As each pair left the bay, the remaining birds seemed with one accord to salute their retiring companions with a universal shout of mingled laughter, howling, and every other earthly and unearthly cry. During their flight they frequently uttered a short shrill bark-like cry. On a quiet day this bird seems to rise with some difficulty from a small lake. But when the wind is high and the water rough they take flight with great readiness. Once on wing they fly very rapidly. When in the water they swim with great part of the body immersed, shewing little more than the head and neck. If hemmed into a corner of the loch, or wounded, they will frequently dive, and on rising to the surface shew little more than the top of the bill till they fancy that the danger is past. The only food that I ever saw in their stomachs when dead, has been a small fresh-water leech and other similar animals. I do not think that fish forms any part of their food, indeed, though their bill is powerful and strong, it is rather adapted for catching shell-fish, aquatic snails, etc., than for holding fish. The egg is oval and of a dark olive green. I have known one pair lay six eggs in the season, the nest having been three times robbed. The last pair of eggs were defective both in shape and colour. The head and neck have a beautiful violet shade. The upper parts are not so much spotted with white as those of the northern diver, which in other respects it very much resembles, being, however, considerably smaller. The young undergo also the same changes. Owing to the value placed on both the skin and eggs of this bird by collectors, it becomes scarcer every year.

The red-throated diver (*Colymbus septentrionalis*) is another bird in many respects very similar to the last. The plumage is not so distinctly marked, however; and it is also easily distinguished by its smaller size, and by the bright red brown of the front part of the neck. The upper part of the throat and head are of a bluish black or lead colour. It is not uncommon along the

coast in autumn and winter, more particularly in immature plumage, when by some authors it is called the "speckled diver." Its nest is placed on the margin of a mountain lake, seldom on an island. The eggs are two in number, and similar to, though smaller than, those of the black-throated diver. Their food and general habits are much the same. The young of all these divers when first hatched are very beautifully marked, and are most curious-looking little balls of soft down. They seem at once to be quite at home in the water, and though in rough weather they get into some sheltered corner, if disturbed they swim boldly out to the centre of the lake, diving with the greatest ease and rapidity. The old birds are much attached to their young, and swim to and fro apparently in great distress and agitation when they are in danger. Their legs are so placed that they are very helpless on land, and in going to and from their eggs, the old birds of all these divers seem to scramble along the ground more in the manner of a seal than of a bird. They, however, always place their eggs on a low flat part of the shore.

Hares have some peculiar habits which, from the animal itself being so common, are not often remarked, as few look on a hare as anything more than an article of food, whereas it is as interesting and beautiful a creature as exists. One peculiarity is that they have a particular fancy for sitting near houses, undeterred by the noise of the men and dogs who may inhabit them. When found sitting, a hare sometimes seems fascinated in an extraordinary manner by the eye of a person looking at her. As long as you keep your eye fixed on that of the hare, and approach her from the front, she appears afraid to move, and, indeed, will sometimes allow herself to be taken up by the hand.*

* I found a hare sitting the other day within five feet of where I was standing, and in a very open place. I wanted to shew her to one of my children who was riding 400 or 500 yards from the spot; so I stood still and sent a man to call the boy. In the meantime I had to call loudly and rate my dogs, four of which were hunting about the place, seeing, with their quick and peculiar instinct, that I saw something. The dogs became very eager, and it required a great deal of calling to keep them quiet

A hare, when dogs are near her, is particularly unwilling to start from her form. In cover shooting many of the old and experienced hares steal off quietly the moment they hear the sound of dogs or beaters at one end of the wood ; and thus their quick senses of hearing and smelling enable them to escape the guns, however numerous and however well placed. Shooters in wood pay too little attention to the direction of the wind. All small game, like deer, are most unwilling to face an enemy standing to windward of them ; but keepers either expect, or pretend to expect, that game will always go exactly ahead of the beaters, though the least observation ought to have taught them the contrary ; for when once running game have discovered the scent of an enemy, they will never go in that direction, but will make their way back in spite of all the noise and exertions of the beaters.

November 28.—Late in the evening the golden plovers (*Charadrius pluvialis*) come in considerable numbers to the bare grass fields to feed during the night ; but when the ground is hardened by frost, they resort to the sands at the ebb-tide, both by night and day. Whilst the tide is high, these birds fly up to the hills, resting on those places where the heather is short ; and they leave the hills for the sands as soon as the sea has receded sufficiently ; and yet their principal resting-place is fully five miles inland.

I have observed the same instinct in the female sheldrakes and make them lie down for five minutes. When the child came I had to point the hare out to him. The poor little animal, notwithstanding all this noise, did not move as much as one of her ears, but remained perfectly motionless, with her eye fixed on mine. The moment I took my eye off her (which I had not done all this time) she darted off, and, springing through the only spot free from her numerous enemies, she was over the brow of the hill in two strides. I remember once sleeping at a shepherd's house in the hills. During almost all the night the dogs of the place were barking and yelping at my deerhound, entirely preventing me from sleeping. I was the first person up, and on going out I started a hare that had made her form up against the turf wall of the cottage, undeterred by the constant noise of dogs that had gone on during all the night.

when sitting on their eggs. Although several feet underground, they know to a moment when the tide has sufficiently ebbcd, and then, and only then, do they leave their nest to snatch a hasty meal on the cockles, etc., which they find on the sands.

Though breeding in the wildest and most lofty districts, the golden plover comes down to the sea-shore and the low country as soon as the young are strong. The nest is placed in rank heather, and is very difficult to find. The eggs are of a pale greenish brown thickly spotted with reddish-brown, but vary very much. In proportion to the size of the bird the egg is very large. In the spring the male is strongly marked with black on the throat and breast, but loses this colour entirely in the winter. Very early in the spring the plover utters its wild but soft note which distinguishes it from all other birds, resembling the whistle of a song bird.* When in good condition the golden plover is an excellent bird for the table; and, though rather shy, is often found in such large flocks as to enable the shooter to kill a considerable number at one shot. Their long powerful wings, however, frequently enable them to escape although severely wounded. When feeding on the sands and mud-banks they retire, as I have said, while the tide is high, to the hill-sides, and I have often been struck by the curious instinct which seems to tell them at what moment the ebb begins. They then leave the hills and fly down to the shore, feeding along close to the receding water. In the spring time, when they live wholly on the mountains, it is very interesting to see the golden plovers leave slope after slope as the evening shades steal over them, flying to the ridges still exposed to the warmth of the sun, collecting finally on the points which catch the last rays, and when everything is in shadow the birds fly down to feed on the swampy flats.

November 30 (1852).—I find the crops of the wood-pigeon full of the seed of the dock, although there is a great extent of newly-sown wheat in every direction.

* In some districts they are known as "the whistling plover."

CHAPTER THE SIXTEENTH.

DECEMBER.—Part I.

Dec. 3 (1847).—I had occasion to remark the courage of the water-rail; one rose from a ditch when the ground was covered with snow. As I did not fire at him, he flew for a hundred yards and pitched in the snow in an adjoining field, and immediately set off to return to the water from which he had been flushed; a large black gull seeing the little black bird in the snow, made a dart at it to carry it off, but the little rail flung himself on his back, and whenever the gull flew at him, struck out manfully with bill and claws, springing up and pulling feathers out of his gigantic enemy and keeping him off. Afraid, however, that the little rail would be killed, I went and drove away the gull, and allowed him to run back to the water.

During the clear frosty nights of this month we hear the owls hooting for hours together in the old ash trees around the house. Occasionally they used to be caught in the pole-traps set for hawks, but the poor fellows looked so pitiable as they sat upright, held by the legs, that I took down all these traps, which were set near the house. The owl is far more a friend than an enemy to man: the mischief he does to game is very trifling; but the service he is of to the gardener, the farmer, and even to the planter of forest trees, by destroying rats and mice, is incalculable. I have a great liking, too, for the quaint, old-fashioned looking bird, and by no means believe him to be the

“*Ignavus bubo, dirum mortalibus omen.*”

My kitchen-garden was overrun with mice, who not only ate

up peas and other seeds, but also nibbled and destroyed great numbers of peaches ; but since I have had a tame owl in the garden, the mice have disappeared entirely, having been destroyed by him and his relations and friends who visit him at night. Sometimes an owl, either the common brown one or else one of the long-eared kind, posts himself all day long bolt upright in one of the evergreens near the house. The small birds first point out his whereabouts, by their clamour and fluttering round him ; but the owl sits quite unconcerned in the midst of the uproar, blinking his eyes and nodding his head as quietly as if in his accustomed sequestered thicket or hollow tree.

The long-eared owl, with his bright yellow eyes and hooked bill, has a most imp-like appearance when seen sitting motionless on the low branch of a tree or ivy-covered wall.

The chief food of owls is mice and birds, but they are also very fond of frogs. When an owl catches a frog, instead of swallowing it whole, as he does a mouse, he tears it to pieces, while still alive, in the most cruel manner, regardless of its shrill cries.

I have no doubt that were it not for their numerous enemies, such as birds of prey, crows, ravens, rats, etc., frogs would increase to such a degree as to become a serious nuisance. The snake is another of the frog's devourers. It is a curious, although I cannot say a pleasant, sight to see one of these reptiles attack and swallow a living frog, of a diameter four times as large as its own. After a frog has been pursued for a short time by a snake, it suddenly seems to be fascinated by the bright sparkling eye of its enemy, and gives up all attempt at escape ; then the snake with a motion so rapid that the eye cannot keep pace with it, darts on its unhappy prey, generally seizing it by the hind-leg. Now commences a struggle for life and death, the frog clinging pertinaciously to any branch or projection which it can reach with his fore-legs ; but all in vain ; for the snake quietly but surely, by a kind of

muscular contraction, or suction, gradually draws the frog into its mouth, its jaws expanding and stretching in the most extraordinary and inconceivable manner, in order to admit of the disproportioned mouthful.

I have little doubt that many birds and other animals are in reality fascinated by the fixed gaze of a snake, when they once come under the immediate influence of his eye. Their presence of mind and power of escape, or even of moving, seem entirely to desert them when their enemy is near them, and they become so paralyzed with fear, that the snake has nothing to do but to seize them. Any person who has seen one of our common snakes swallow a large frog will readily believe all accounts of deer being swallowed by the giant-serpent of the East.

The short-eared owls (*Otus brachyotus*) visit us in October, and on their first arrival are frequently put up in turnip fields, high rushes, heather, and indeed sometimes out of a rough ploughed field. This bird has more of a hawk-like appearance about the head than any other of our owls, and has longer wings in proportion to its body. The upper parts are variegated and pencilled with yellowish brown and dark brown; the under parts are yellowish with longitudinal streaks; the horns are much shorter and smaller than those of the last-named species, and indeed are not always erected; the irides are bright yellow. I have frequently seen this bird hunting about rushy places at a much earlier hour than any other owl would be abroad at. Its flight is more rapid too and hawk-like. Its food consists principally of the field mice which frequent these places, though neither snipe nor bunting escape its attacks. Though principally only a visitor, the short-eared owl breeds in the higher districts of the country, building a slight nest in a tuft of long heather on the side of some steep bank. The egg is round and white. On its first arrival as a bird of passage, it is frequently found in small companies. As many as a dozen have been put up in one turnip field. They however soon disperse, and then are only found singly. I have seen them far more frequently

in the open heather than amongst trees. In this respect they differ from any other owl of this country.

The white owl (*Strix flammea*), though so common in many parts of England, is comparatively rare in this country. I have however seen it in the rocks of the Findhorn, and in other places. The upper parts are of a fine yellow colour beautifully marked with lines of brown, and with numerous small white spots; the lower parts are pure white; the wings extend beyond the tail; the irides black. The white owl frequents buildings and old ruins, but seems, where numerous, particularly to attach itself to church towers; occasionally, however, it takes up its abode in a hollow tree. This bird is of great benefit to the farmer, being a most indefatigable destroyer of mice, which appear to form almost its only food. The numbers they destroy must be very great where they are unmolested and allowed to breed. None indeed but the most ignorant gamekeeper would like to see this owl nailed up amongst his other trophies. Quick as the hearing of the mouse is, that of the owl seems to be still more acute; and the peculiar formation of their wings and soft texture of their feathers enable them to glide through the air without the slightest noise or rustling, and so to surprise their timid and watchful prey. Unlike other rapacious birds, the white owl seems sometimes to breed in company, as I have seen more than a dozen young ones of different ages, but all unable to fly, crowded together in the same church tower, being the progeny, as far as I could judge, of several different pairs of owls. If it was more generally known how much damage is done to young plantations by mice, and how many of these creatures are killed by owls, more particularly by the white owl, the bird would, I think, enjoy a perfect immunity from trap and gun.*

* This is one of the few birds I have known transplanted and breed and thrive in its new country. A pair of white owls were brought from England by a school-boy more than twenty years ago to the banks of the Nairn, where their descendants are now in good numbers. Their first independent settlement was in the tower of Kilravock.—C. I.

The snowy owl (*Nyctea nivea*), a magnificent bird, is an occasional, though a rare, visitor here. I have known more than one instance of its being seen and killed on the sea coast of this country. The breadth of the wings in the female bird is above five feet. The male is considerably smaller. The plumage is white with brown markings. These marks gradually decrease with the age of the bird, and in old specimens the plumage becomes nearly all white. In this country its food appears to consist principally of rabbits. In Greenland and Iceland this bird is not uncommon, and it preys on the smaller quadrupeds which are found in those regions. Nothing can be more picturesque and startling than the sudden appearance of a snowy owl gliding out of a dark recess or cavern, with its ghost-like appearance and noiseless flight. It is said to be a constant resident on the most northern of the smaller Shetland Islands.

I have only known one instance of the eagle owl (*Bubo maximus*) being seen in this district, and it was not then captured; but the description given to me could not have applied to any other bird. The owl which I allude to was seen in a tree in the woods of Brodie. Its large size, long erect horns, and bright orange-coloured eyes, distinguish it at once from any other of the owls. Its food consists of hares, rabbits, and any small quadrupeds. Its loud hooting has a most striking and startling effect in the solitudes of the forests of Sweden and Germany, as they utter cries of defiance or of call to each other from different rocks or trees, echoing far and wide in the stillness of night, and sounding like nothing earthly.

The little owl, called Tengmalm's owl (*Nyctale funerea*), does not exceed eight inches in length. The plumage is irregularly variegated, and spotted with white and brown. It can scarcely be said to belong to this district, though I have had an owl described to me as being seen in a wood near Elgin which could be scarcely of any other species. I have, however, never known of one being killed here. On the opposite coast of Sutherland

I have known of an owl of this kind being killed by Mr. Dunbar in the ruins at Spinnindale. Its appearance in any part of the kingdom is, however, very rare, and when it does visit us, its nocturnal habits and small size prevent its being noticed.

December 7 (1852).—Both yesterday and to-day it happened that I wounded a partridge not far from the Quarry Road, and on both occasions a peregrine falcon struck the bird in the air, and carried it away before my eyes.

Early in December the roebucks lose their horns. I have shot them during the first week of this month with the horns so loose that they have fallen off as the animal was carried home. They are, however, in as good or perhaps even better order for the table in December than at any other time.

The roe being very much disturbed by wood-cutters in most of our woods, keep to the wild, rough cover, too young for the axe, which lies between the upper country and the shore; there they live in tolerable security, in company with the foxes, black game, and wild fowl, which tenant the woods and swamps of that district. Occasionally, whilst I am woodcock shooting, a roe affords a pleasant variety and weighty addition to the game bag. All my dogs, whether pointers, spaniels, terriers, or retrievers, become very eager when on the scent of roe.

The blackcocks, like other birds, are very fond of catching the last evening rays of a winter's sun, and are always to be found in the afternoon on banks facing the west, or swinging, if there is no wind, on the topmost branch of the small fir trees. On the mountains, too, all birds, as the sun gets low, take to the slopes which face the west; whilst in the morning they betake themselves to the eastern banks and slopes to meet his rays. No bird or animal is to be found in the shade during winter, unless it has flown there for shelter from some imminent danger. This is very remarkable in the case already mentioned of the golden plovers, who in the evening ascend from slope to

slope as each becomes shaded by intervening heights, until they are all collected on the very last ridge which the sun shines upon. When this is no longer illuminated, and the sun is quite below the horizon, they betake themselves to their feeding-places near the sea-shore or elsewhere. Goats have the same habit.

There is no fresh-water lake which has so large a quantity of wild fowl on it as the Loch of Spynie; and I do not know a more amusing sight than the movements and proceedings of the thousands of birds collected there during this season. All wild fowl, from swan to teal, swarm on this lake (I have known one instance of the bittern having been killed here*); and it is most interesting to see the habits and manners of feeding and of passing their time of the different kinds, some feeding only by night and others moving about at all hours. On the approach of night, however, the whole community becomes restless and on the move, and the place is alive with the flocks flying to and fro, uttering their peculiar notes, and calling to each other, as they pass from one part of the loch to another. The mallards for the most part take to the fields in search of food, flying either in pairs or in small flocks of five or six. The widgeon keep in companies of ten or twelve, whistling constantly to each other as they fly to feed on the grassy edges of the lochs. The teal and some other birds feed chiefly on the mud-banks and shallows which abound in parts of this half-drained lake; and amongst the loose stones of the old castle of Spynie, which overlooks it, and where formerly proud ecclesiastics trod, the badger has now taken up his solitary dwelling.†

The flight of wild fowl in the evening is more rapid in reality than it appears to be; and I have seen many a good shot

* Another bittern was killed at a rushy pool near Lochnabo. From its retired habits, and keeping as it does amongst tall rushes and reeds, this bird may occur more frequently without being seen. It feeds, like the heron, on whatever fish or animals it can catch and swallow in its watery retreats.

† Spynie, a noble castle, quite ruined, was of old the country palace of the Bishops of Moray.

fairly puzzled by it, and unable to kill these birds at this time of the day with any certainty until practice had taught them the necessity of aiming well ahead. Another great requisite to success in wild-fowl shooting is a first-rate retriever, quick and sagacious in finding and bringing the killed and wounded birds from the swampy and grassy places in which they fall. Long shots ought never to be taken in the evening, as, independently of the time lost in loading (during which operation, by the bye, the birds always contrive to come over your head) you are sure to lose many which fly away wounded, to drop several hundred yards off, serving only to feed the foxes and crows, always on the look-out for food near lakes and marshes.

Some retrievers have a most wonderful instinct in discovering whether a wounded bird is likely to fall; invariably marking down and finding them, without wasting their time and strength in vain pursuit of those which are able to escape.

Nothing is more trying to the constitution of a dog than this kind of shooting in the winter; when the poor animal spends his time either in paddling or swimming about in half-frozen water, or in shivering at his master's feet whilst waiting for a fresh shot. The master perhaps has water-proof boots and a warm jacket on, a pipe in his mouth, and a mouthful of brandy to keep him warm; while his poor dog has none of these accompanying comforts, and is made to sit motionless on the wet or frozen ground with the water freezing on his coat. For my own part I administer as much as I can to the comfort of my canine companion, by always carrying him some biscuits, and by giving him either my plaid or a game-bag to lie upon. It is amusing enough to see the retriever wrapped in the plaid, with only his head out of it, watching eagerly for the appearance of a flock of widgeon or ducks, which he often sees before I do myself.

The best and most sagacious dog of this kind that I ever saw, and whose cunning and skill were unequalled,* I sold

* "Grip."

to make room for a stronger retriever, who, however, never equalled his predecessor in sagacity and usefulness. I the less repented having parted with the dog, as he fell into the hands of a friend of mine, Sir Alexander Cumming, a most excellent shot and persevering wild-fowl shooter, who fully appreciated the good qualities of the animal. The Loch of Spynie belonging principally to this gentleman's family, he preserves the place strictly; and I do not know so successful a wild-fowl shooter—successful I mean in a gentlemanly and sportsmanlike manner—and with what I term *fair shooting*. With due deference to the followers of this sport, I cannot include under that denomination the punt and swivel-gun system. Amongst other objections to this kind of sport is the vast number of birds maimed, wounded, and left to perish miserably, or to feed crows and other vermin. Not even Colonel Hawker's amusing work on the subject reconciles me to this (proh pudor!) his favourite branch of sport.

Dec. 11 (1846).—Severe snow storm; widgeon are driven to the open ditches and are very tame. The long-tailed ducks are in every open pool and ditch, and are so tame that they will rather dive than fly, however near I approach.

12th and 13th.—The snipes begin to come in great numbers to every open ditch, but they are very wild, in consequence of all their cover being beaten down by the snow, which makes them unable to conceal themselves.

Dec. 13 (1852).—I see peregrines nearly every day. There is one—a very large one—who, whenever he hears me shoot in a particular direction, appears, and has three times, within the last ten days, carried off a partridge which I have shot. It is not a young one, but being blue on the back I suppose it is an old bird, though much spotted below. Yesterday the largest peregrine I ever saw passed me with a pigeon in her feet; she was not eighty yards off and her bright feet holding the bird were quite visible; she was dark slate colour above and nearly white below.

14th and 15th.—The redwings, thrushes, linnets, and other small birds become very tame and distressed for want of food ; a tawny bunting, a rare bird here, came into the house.

In the snow I constantly see the tracks of weasels and stoats going for considerable distances along the edges of open ditches and streama, where they search not only for any birds which may be roosting on the grassy banks of the ditches, but also for eels and whatever fish they can make prey of.

The otters, too, puzzled by the accumulation of ice and frozen snow on the shallows, and about the mouth of the river, go for miles up any open ditch they can find ; turning up the unfrozen mud in search of eels, and then rolling on the snow to clean themselves.

There are few animals whose scent is so attractive to dogs of all kinds as the otter ; but it requires that they should have great experience to be sure of finding an otter, or of following him with any certainty when started ; so strange and well concealed are the nooks and corners of broken banks and roots under which he lies, or takes refuge when hunted.

My old keeper has great delight in the pursuit of otters, and continually neglects his more legitimate duties for the sake of getting a midnight shot at one of these animals. Having carefully determined on the way from which the wind blows, and made himself sure that no eddy of air can carry his own scent towards the stream, the old man sits well concealed under a projecting bank near some shallow ford, where he expects the otter will appear on his way up or down the burn. This plan seldom fails, and he not unfrequently makes his appearance in the morning with a dead otter in his hand, the result of many hours of patient watching in a winter's night, of which the disordered and bemuddled appearance of his habiliments bears further witness. I cannot plead guilty of ever sending him on these expeditions. In the first place I have no very deadly feud with the otters ; and, in the next, I think that the old fellow would be better in his bed than squatting under a broken bank through a long winter's night.

Though not an advocate for Eley's cartridges for game shooting, I use a great number of them against stronger animals, such as otters, foxes, and roe, and also for wild-fowl shooting of all kinds. In steady hands these cartridges undoubtedly do great execution amongst ducks and geese; but they are very apt to induce the sportsman to take shots which are too long and random, conceiving that no distance is too great for this kind of charge. That they very frequently do not open at all, or at any rate not sufficiently soon, I have clearly ascertained; and I have often found in shooting roe and hares that the cartridge has passed through the animal like a single ball. Every sportsman knows that this will not answer his purpose in general shooting; and, therefore, that Eley's cartridges should only be used in the most open places, and at strong birds and animals.

The wild swans still remain feeding in the lakes, and seem to have made themselves completely at home; going lazily off to the bay when disturbed, but seldom taking the trouble to do so unless the particular loch which they frequent, and in which they feed, comes within the line of my beat for wild ducks. When their territory is invaded, they first collect in a close body, and after a short conference, flap along the water for some distance, and gradually rising fly across the sand-hills with loud cries to the sea. Hundreds of ducks of all kinds constantly attend on the swans when feeding, to snatch at the water-grasses and weeds pulled up by the long-necked birds from the bottom of the shallow water—a proceeding the swans seem by no means to approve of, as they evidently have no wish to labour for the good of these active little pirates.

Dec. 20.—Captain Campbell,* and Sir William Cumming's

* Captain Campbell, afterwards Major, 23d Fusiliers; severely wounded at the battle of the Alma, and died of fever at Scutari, from over-exertion in performance of his duty, as Deputy-Assistant Quarter-Master General.

Captain Campbell was out shooting with Mr. St. John at Pluscarden, caught him in his arms when he was attacked by the fatal seizure from that time incapacitated him from following his favourite and eventually cut short his valuable life at an early age.—ED.

keepers, killed five roe to-day, hunting with fox-hounds. A fault in fox-hounds for roe-hunting is, that they run too mute when near the game, and that they almost invariably eat every wounded roe which they run up to, unless some person is at hand to prevent them. When roe have been much worried by these fast hunting dogs, they are very apt to leave the covers and take off to some other.

It has often occurred to me, how perfectly helpless a man would be were he to lame himself during the distant and lonely wanderings on the mountain, which the pursuit of deer and wild game sometimes leads him into ; and I was forcibly reminded of this by a curious accident which happened to myself in the woods of Altyre while roe-shooting on the 28th of this month.

The hounds were in pursuit of a roe ; and I was partly occupied in listening to their joyous cry, and partly in admiring the beautiful light thrown by the low rays of the winter sun on the red trunks of the firs, contrasted as it was with the gloomy darkness of their foliage, when I heard the foot of a roe as it came towards me, *ventre à terre*. Taking a cool aim I sent a cartridge through the poor animal's head, who fell rolling over like a rabbit. I went up in order to bleed her, according to rule, when just as I was knife in hand, I heard the hounds coming up in chace of another roe. I dropped the knife on the heather, and at that instant the dying roe gave an expiring plunge, as animals almost always do when shot in the head, and her hind foot struck the hilt of the *couteau de chasse*, driving it straight into my foot. Having, not without some little difficulty, drawn it out, I had next to cut off my shoe, when the blood came out like a jet d'eau. Making a tourniquet of my handkerchief and a bit of stick, I managed to stop the bleeding, not however before I began to feel a little faint. Then, not waiting for my companions, who were in a distant part of the woods, I hobbled off to a forester's house, where I rebound the cut, and having directed the man where to find the roe, and to tell the other shooters that I had left the

wood, I made my way homewards as well as I could, and luckily meeting on the road one of my servants exercising a pony, I got home without more inconvenience ; but I had to pass many a long day upon a sofa. Had a similar accident happened on some of the wild and distant mountains of the country where I often shoot, I should probably not have been seen again, till the ravens and the storms of winter had left nothing but my bones. From such slight and trivial causes do accidents sometimes happen to remind us how helpless we all are.

In the low parts of Morayshire the snow seldom lies long, and consequently after every lengthened snow-storm there is a migration not only of wild-fowl of all kinds, but also of partridges and other game, who come down to the bay and shore from the higher parts of the district, where the ground is more completely covered with snow, the depth of which increases gradually as one recedes from the shore.

A more strikingly varied drive of twenty miles can scarcely be taken than from the Spey at Grantown down to Forres on the sea-side, near the mouth of the Findhorn River. After emerging from the woods of Castle Grant, in the immediate vicinity of the Spey, and that curiously-built place Grantown, with its wide street of houses, almost wholly inhabited by Grants, the traveller comes out on the extended flats and moors of the district round Brae Moray, where there is scarcely a sign of life, animal or human ; except when a grouse rises from the edge of the road, or runs with comb and head erect a few yards into the heather, and then crouches till the intruder has passed by. There is, to be sure, a turnpike-house here, but it is a wretched-looking affair, and its tenant must live a life as solitary as a lighthouse keeper. After several miles of this most dreary though not very elevated range, the road, missing the first view of the firth and Cromarty Bay, enters the woods, and for a long distance passes through a succession or rather one continued tract of fine fir-trees. It goes through the beautiful grounds of Altyre, and along the banks of the most picturesque part of

the Findhorn ; and, gradually descending, it opens upon the rich fields of Moray, and the broad Moray Firth, with the mountains of Ross, Caithness, and Sutherland—a glorious range—in the distance : a great and most pleasing change from the dreary brown muirland near Brae Moray. Having passed through this long and varied tract of woodland, the road suddenly emerges into the rich open corn-land of the most fertile district in Scotland, near the bay of Findhorn, where the river, as if tired by its long and rapid course, gradually and slowly mixes itself with the salt water of the Moray Firth. By crossing the river near this spot, another very different kind of country is reached—the strange sand-hills of Findhorn or Culbin. Thus, in a very few hours' drive, as great a variety of country is passed through as could be found in any part of the island, each portion of which is characteristic and interesting.

Forres itself is one of the prettiest and cleanest little towns in the kingdom. The entrance from the river Findhorn is extremely picturesque ; and the bright sparkling burn, with the public bleaching-green close to the town, always gives it a gay and lively appearance. The town magistrates, too, with public-spirited zeal, have laid out pleasure-grounds and walks on the wooded hill above the town, which, as regards the views which they command, are probably not surpassed by any in the kingdom.

During the time that the snow remained on the ground, the rabbits in a wood near my house took to barking the fine old hollies, thus destroying trees of a very great age, and of from eight to ten inches in diameter. Oaks also of twenty years' growth are frequently destroyed by these animals. In fact, wherever they once establish themselves they overrun the country and become a nuisance. In the sand-hills of Culbin I admit that they can do but small mischief, there being in that region little else but bent, sea-weed, and furze bushes. They thrive however on this food, and in spite of foxes and guns keep up their numbers sufficiently to afford plenty of sport. The foxes are

numerous in the rough wild district which lies to the west of the sand-hills, and hunt regularly for rabbits wherever they abound. From their tracks it is evident that two foxes constantly hunt together; and they take different sides of every hillock.

If a fox finds a rabbit at a sufficient distance from the cover, he catches it by fair running; but most of his prey he obtains by dint of the numberless stratagems which have earned for him a famous, or rather an infamous, reputation from time immemorial. From what I have myself seen of the cunning of the fox, I can believe almost any story of his power of deceiving and inveigling animals into his clutches. Nor does his countenance belie him; for handsome animal as he certainly is, his face is the very type and personification of cunning.

The cottagers who live near the woods are constantly complaining of the foxes, who steal their fowls frequently in broad daylight; carrying them off before the faces of the women, but never committing themselves in this way when the men are at home. From the quantity of *débris* of fowls, ducks, etc., which are strewn here and there near the abodes of these animals, the mischief they do in this way must be very great.

Cunning, however, as they are, I not unfrequently put them up while walking through the swamps. They lie, in fancied security, on some dry tuft of heather in the midst of the pools; and not expecting or being accustomed to be disturbed, they remain there until my retriever raises them close to my feet. One fine day in the beginning of this month, when the sun was bright and warm, a setter who was with me made a very singular kind of point in the long heather, looking round at me with an air most expressive of "Come and see what I have here." As soon as I got near, the dog made a rush into the rough heather, putting out a large dog fox, who had been napping or basking. The fox made a bolt almost between my legs to get at a hole near the place; but I stopped him with a charge of duck shot: the dog, though as steady as possible at all game,

pursued the fox full cry, and when he rolled over, worried and shook him, as a bull-dog would a cat.

December, in this part of the island, is seldom a very cold or boisterous month; our principal storms of snow and wind come with the new year. Frequently indeed there is no covering of snow on that part of the county which lies within the influence of the sea-air till February.

December 19 (1847).—Robins are very carnivorous, devouring raw meat most voraciously;—so do tomtits.

During the first days of snow and storm a constant immigration of larks takes place; these birds continuing to arrive from sea-ward during the whole day, and frequently they may be heard flying in after it is dark. They come flitting over in a constant straggling stream, not in compact flocks; and pitching on the first piece of ground which they find uncovered with snow, immediately begin searching for food; feeding indiscriminately on insects, small seeds, and even on turnip leaves, when nothing else can be found.

December 21-24.—Shot ducks at loch of Spynie, where there were immense flocks of widgeon, mallards, teal, coots, and other water-fowl. Spynie is the best loch in the north of Scotland for wild-fowl, and a great resort of swans. Sir Alexander Cumming killed fourteen mallards in the space of an hour or two. He placed himself in a good situation, with a white cap and shirt on, and killed them as they flew over his head.

The wagtails frequent the sheepfolds near the shore, and keep up an active search for the insects which are found about sheep.

The pied wagtail (*Motacilla Yarellii*), a well known and favourite bird, is very common, frequenting every stream and ford, more especially in the neighbourhood of towns and houses, in the vicinity of which it finds more of its food, which consists of insects of all sorts, than elsewhere. In the autumn and winter months vast numbers flock in an evening about the reeds and rushes of Loch Spynie, and other similar places,

where they roost. Sometimes too, towards nightfall, the single willow or alder bushes by the edge of the streams are absolutely full of wagtails. This bird builds its nest in holes of walls, crevices of rocks, and similar places. The egg is white, spotted with brownish ash colour.

The gray wagtail (*Motacilla sulphurea*) is peculiarly elegant both in colour and shape. It is rather more slender than the last-named species, and has a longer tail. The head and back are of a blue gray. The throat and chin black. The lower parts of the breast and body and the rump are bright yellow. The outer tail feathers are pure white. The next tail feathers are white, with the outer edge black. The remaining centre feathers are black or of a dark gray approaching to black. Feet light brown. Bill dark brown. There is a light stripe above the eye. In the winter this bird loses the black on the throat, and is altogether of a less bright plumage. Though not so common as the pied wagtail it is tolerably abundant, frequenting streams and pools of water. When sitting on the stones, or running along the ground in pursuit of insects, with its long tail in constant motion, it is an amusing and interesting object. It builds in holes of walls near the ground and under stones, frequently under the arch of a bridge. Eggs white, thickly spotted with yellowish brown.

The yellow wagtail (*Motacilla campestris*) is much more rare here than any other species of wagtail. Indeed, I only remember seeing it two or three times in this county. He is a shorter bird than the last, and has not a proportionate length of tail. The upper parts are of a pale green or olive colour. The lower parts are bright yellow, over the eye is a bright yellow streak. The outer tail feathers white, the rest of a dark colour, approaching to black. Legs black. The bill black. The eggs are white, not very clear, and thickly spotted with brown and ash colour. The nest, as far as my own observation goes, is placed on the ground in grass, in green wheat, or a similar situation, and not in holes like the other wagtails. There is another species not much known, named

the *Motacilla flava*, differing from the last in having the head of a blue gray colour. I have never killed this bird, but have little doubt that it might be found wherever wagtails are numerous.

December 31.—My falcon got loose three days ago, and I had not seen her since then, but this morning I saw a hawk in full pursuit of a magpie, and, thinking it was her, I called in the manner I used to call her, and she immediately left her chase, and after wheeling round and round for a short time, came down on my arm, and began to caress me.



CHAPTER THE SEVENTEENTH.

DECEMBER.—Part II.

CONCLUSION.

A FEW years back, when living in the north of Scotland, I was anxious to get some ptarmigan in their beautiful winter plumage, which is as pure a white as the snow itself. It was late in the season, and the ground was covered with snow; but as there had been a few days' frost, the walking was by no means bad; so I determined to start, in spite of the cold and snow, and the grumblings of old Donald, who had but little inclination for the pursuit.

Our plan was to reach a shepherd's house, situated about ten or twelve miles—that is to say, about four hours' easy walking—up the course of the river; there we were to sleep, and to attack the ptarmigan on the following day—the mountain where I expected to find them being situated near the shepherd's house. At the first break of day Donald and I left the house, accompanied by one quiet dog, whose personal inclinations tended rather to otter-hunting and such like pursuits than to grouse-shooting; but his nose was so good and his intelligence so great, that in cover-shooting and rough work he was invaluable. Pointers would have been useless for ptarmigan in the then state of the ground; and I also thought it not unlikely that we might fall in with the track of an otter or wild cat during our walk up the river side.

As soon as we emerged from the woods a beautiful sight opened to us; the morning sun, although not yet visible, tinged the mountain tops to the west, their snow-covered summits

shining with all the varied colours of the rainbow. Soon, however, the bright sun of a frosty winter's day rose behind us, making the old birch-trees which grow on the slopes above the river throw out their dark shadows on the snow. Here and there a roebuck or two "*stotted*" (to use Donald's favourite expression) over the turf wall into the shelter of the fir woods, out of which we had just come; the grouse-cocks were crowing on the juniper-covered hillocks, which shewed their lively green above the surrounding snow; and the black-cocks launched themselves off the birch-trees, where they seemed to have been awaiting the first rays of the morning sun. Everything around us was full of beauty; and dreary as a mountainous country is when covered with snow, still it is magnificent, varied too as it now was by wood and water and numerous living creatures, all appearing to be in as full enjoyment of life as if it had been a genial morning in May instead of a most orthodox Christmas-like day. The gray crows were just going forth in pairs from the woods, calling to each other with loud ringing cries, and all bending their way straight to one point, where, as we afterwards found, two drowned sheep had been cast ashore in a bend of the river.

We walked on, and soon came across the tracks of two or three otters, where they had been going in and out of the water on their way up stream, after fishing in the deep pools where the two waters met near the house. These pools are favourite resting places for salmon and sea-trout, and therefore are sure to be frequented by the otters.

Opposite to a strip of birch-trees one of the largest otters seemed to have left the river, and to have made for a well-known cairn of stones, where I had before found both marten-cat and otter. Half way up the brae he had entered a kind of cleft or hole, made by a small stream of water, which at this spot worked itself out of the depth of the earth. "He'll no stop in this," said Donald; "there's a vent twenty yards above, and I ken weel that he'll no stop till he is in the dry cairn,

forty yards higher up the brae." Nor was the old man far wrong, for we found where the otter had squeezed himself up to the surface of the ground again, leaving a small round hole in the snow. We carefully stopped up both entrances to this covered way, and then Donald went on with the dog to dislodge him from the cairn, having first given me the strongest injunctions to "*stand quite privately*" a few yards from the hole which we had just stopped up. The dog at first seemed little inclined to leave me, but presently understanding the service upon which he was to be employed, he went off with Donald with right good will, putting his nose every now and then into the tracks of the otter in the snow, as if to ascertain how long it was since his enemy had been there.

They soon arrived at the cairn, which was of no great extent, and not composed of very heavy stones. After walking round it carefully, to see whether there were any tracks farther on, Donald sent on the dog, who almost immediately began to bark and scratch at a part of the cairn. Donald was soon with him, and employed in moving the stones, having laid down his gun for that purpose, knowing that the otter was quite sure to make straight for the place where I was standing, if he could dislodge him. Presently the dog made a headlong dive into the snow and stones, but drew back as quickly with a sharp cry. In he went again, however, his blood now well up; but the otter's black head appeared at a different aperture, and now dog and man were dancing and tumbling about amongst the snow and stones like lunatics,—the otter darting from place to place, and shewing his face first in one corner and then in another.

Donald found this would not do; so he again commenced moving the stones. Presently he called out to me, "Keep private, sir! keep private! the brute is coming your gate!" *Private* I had kept from the moment he had stationed me, till my fingers and feet were nearly frozen. Donald seized the dog and held him, to prevent his running in the way. All this passed in a moment, and I saw the snow heaving up above the

otter, who was working through it like a mole; assisted, probably, by the heather, which prevented it from being caked down in a solid mass, as would have been the case on a smooth field. I knew that he would appear at the hole which we had stopped; and therefore I did not risk a shot at him.

He worked on until he was close to the hole; when he emerged quietly and silently, and crept towards the well-known place of refuge. On finding it completely stopped up, the countenance of the poor animal assumed a most bewildered expression of astonishment and fear; and lifting himself up on his hind legs, he looked round to ascertain what had happened. On seeing me he made off towards the river, with as long leaps as the snow would allow him; and as it was tolerably hard, he got on pretty quickly till my charge of shot put an end to his journey.

The report of the gun started two fine stags, who had been feeding along the course of a small open rill which ran into the river just above where we were; and I was astonished to see the power with which these two great animals galloped up the hill, although they sank deep at every stride. When half way up, they halted to look at us, and stood beautifully defined on the white snow; they then trotted quietly off till we lost sight of them over the summit of the hill. Donald in the mean time had carefully concealed the otter under the snow (marking the place by a small pyramid of stones), as I intended to have him skinned on our return home.

The lakes and the still pools being frozen, we saw several herons standing in their usual and characteristic attitude, waiting patiently in some shallow running water for any unwary trout that might pass within reach of their unerring bills; and here and there a heron who appeared to have made his morning meal was standing, as quietly and as unsubstantial-looking as his own shadow, perched on one foot on a stone in the middle of the stream. A golden-eye or two were diving earnestly and quickly in the quieter parts of the river, taking wing only on

my near approach, and after flying some distance up the stream, coming back again over my head, making with their rapid pinions the peculiar clanging noise which distinguishes their flight from that of any other duck. They passed me unmolested, for had we killed them they would have been useless. Indeed, no diving duck is fit to eat, with the exception perhaps of the pochard and scaup; and even these, although I have heard them much praised, are far inferior to mallard, widgeon, or teal, which are, in my opinion, the only British ducks worth killing for the larder.

On leaving the birch woods the country became wild and dreary, and frequently we had no small difficulty in making our way along the trackless snow. The otters had turned off here and there from the river, and we saw no more of their footsteps. A wild cat had been hunting at one part of the banks, but had crossed where some stones raised above the water had enabled her to do so tolerably dry footed. Although not so unwilling to get wet as the domestic cat, this animal appears to avoid the water as much as possible; though I have known instances of their swimming rivers.

"We must try to get a brace of grouse or something to take up to the shepherd's," said my companion, "as you're no that fond of braxy, sir, and I doubt if we'll get any other 'venni-son' there the night." "Indeed I am *not* fond of braxy,"* was my answer; "and a grouse or two we must get." But we had first to eat our luncheon, having breakfasted hastily at a very early hour, and we determined to perform this ceremony at a spring about a mile ahead of us; and, as I remembered having frequently seen a pair or two of ducks about it in frosty weather, when we drew near the place we advanced with great care, keeping ourselves well concealed till within twenty yards of the spot. "Now, then, Donald, you look over the bank, and see if any ducks are feeding on the grass about the well. If there are, you

* *Braxy*—A sheep which has died of disease; also mutton of this description.—*Jamieson's Scottish Dictionary*.

shoot at them on the ground, and I will take them flying." Donald wormed himself on a little, regardless of filling his pockets with snow, and having looked cautiously over, beckoned to me to come nearer, which I did. "There are six bonny gray dukes feeding about the well, sir; three drakes and three dukes." "Take care then, Donald, and get two or three of them in a line before you fire." After waiting a little with his gun pointed towards the place, Donald fired one barrel, and then, as they rose, the other. The latter killed none—"ut mos fuit." However, as only four rose (two of which, both mallards, fell to my two barrels), I presumed that he had done some execution with his first shot; and sure enough he had riddled two most effectually.

The place where the ducks had been feeding was a bright green spot in the midst of the snow, caused by the spreading of the waters of a fine unfreezing spring. Around it were the tracks of several deer who had been cropping the green herbage, and had evidently sunk to their knees at every step which they made in the soft ground. Two snipes rose while we were picking up our ducks.

As we ascended higher the river grew more rapid, and was the only object in our view which was not perfectly white. Having finished our frugal luncheon, and swallowed a modicum of whisky, we again "took the road," as Donald was pleased to express it, although road there was none.

The grouse had entirely disappeared, and we saw no living creature except a pair of gray crows, who alighted under the bank of the river. "There will be more of those fellows there," said I. "Deed, ay, sir! do you mind them that we saw at first starting? they all came up this gate, and we've seen none of them. I'd like weel to get a good shot at them." We therefore went quietly on to the place, the crows being quite concealed from us by the bank. On looking over it cautiously, there they were, indeed, a whole flock of these most mischievous of all vermin. "Now then, Donald, take care, and kill all you

can," said I. "Deed ay," was his answer, with a quiet chuckle. The next moment our four charges of shot were driving through the midst of the crows, and such a *family shot* at these cunning birds was not often made, as we killed or maimed no less than seven. But the next instant, to our mortification, a magnificent white-tailed eagle rose not twenty yards from us, out of the bed of the river, where he had been feeding on another drowned sheep which had grounded there. He was so gorged that he could scarcely get clear of the banks. After a few wheels, however, he got well launched, and was soon winging his way towards the cliffs of the mountain ahead of us. Donald almost wept with vexation, but for my own part I did not regret the escape of the noble bird so much.

Turning round the bend of the river, we came within sight of our resting-place for the night, but it was still a long distance off. On the left, rising with a clear outline in the bright sky, was the lofty mountain where we intended to try for ptarmigan. The snow, however, looked so deep on it that we began to think we might as well have stopped at home. But I was very anxious to get a few birds in their pure winter plumage, and determined not to give in, if any chance of success offered itself. As we approached nearer to the shepherd's hut, the hill-sides, which were covered with fine old weeping-birch, presented a most beautiful appearance; and here we saw a great many blackcocks, either perched on the leafless branches of the birch, or trying to make a scanty meal of the juniper-berries, which they contrived to get at here and there, where the snow was not so deep. I shot a couple of fine old birds as they flew over our heads from one side of the river to the other; and Donald missed several more, as shooting flying is decidedly not his forte.

Our approach had been observed from a distance, and the shepherd was ready to receive us. His wife, "on hospitable thoughts intent," hurried to and fro, piling peats and fir-roots on the fire. I had got wet at the spring where we killed the ducks, and my trousers, higher than my knees, were as hard as

boards with the intense frost that had come on as the evening set in. However, "*Igne levatur hyems*"—I was soon thawed to a proper consistency, and immediately began to superintend the cooking of some of our game. In as short a time as possible a stew worthy of Meg Merrilies herself was prepared; but with true Highland taste Donald preferred, or pretended to prefer, some "braxy" mutton which the shepherd's wife set before him; the odour of which was enough to breed the plague or the cholera anywhere but in a Highland hut. "Deed, your honour," said the shepherd, "it's no that bad, considering we did not find the sheep for some days after it died, and the corbies had pulled it about a bit. The weather was gay an' wet at the time, or it would not have had such a high flavour; but we steeped it a day or so, to get rid of the greenness of the meat." I thought to myself that, "*considering*" all this, together with the additional fact that the sheep had died of a kind of inward mortification, the bowels of Donald and the shepherd must be stronger even than the "*dura ilia messorum*" which we read of at school.

Our host was tolerably confident that we should manage to get a few ptarmigan if we started early, so as to make the most of the day, and if the snow continued hard. "But for a' that, it will no be easy travelling," was his final remark.

Before daylight I was up, and making my toilette by the light of a splinter of bog fir. The operation did not take long, nor did it extend beyond the most simple and necessary acts. The "gude wife" had prepared me rather an elaborate breakfast of porridge, tea, and certain undeniably good barley and oat cakes, flanked by the remains of my supper, eggs, etc. As Donald seemed not to like the expedition, I left him at the hut, with injunctions to procure enough black game or grouse to form our supper and next day's breakfast. The shepherd took down a single-barrel gun of prodigious length and calibre, tied together here and there with pieces of string; and having twisted his plaid round him, and lit his pipe, was ready to

accompany me. So, having put up some luncheon in case we were out late, we started.

The sun was not up as we crossed the river on the stepping-stones which the shepherd had placed for that purpose, but very soon the mountain-tops were gilded by its rays, and before long it was shining brightly on our backs as we toiled up the steep hill-side. My companion, who knew exactly which was the easiest line to take, led the way; deeply covered with snow as the ground was, I should, without his guidance, have found it impossible to make my way up to the heights to which we were bound. "I'm no just liking the look of the day either, sir," was his remark, "but still I think it will hold up till near night; we should be in a bonny pass if it came on to drift while we were up yonder." "A bonny pass, indeed!" was my inward ejaculation. However, depending on his skill in the weather, and not expecting myself that any change would take place till nightfall, although an ominous-looking cloud concealed the upper part of the mountain, I went on with all confidence.

Our object was to reach a certain shoulder of the hill, not far from the summit, from which the snow had drifted when it first fell, leaving a tolerably-sized tract of bare stones, where we expected to find the ptarmigan basking in the bright winter sun. It was certainly hard work, and we felt little of the cold as we laboured up the steep hill. Perseverance meets with its reward; and we did at last reach the desired spot, and almost immediately found a considerable pack of ptarmigan, of which we managed to kill four brace before they finally took their flight round a distant shoulder of the hill where it was impossible to follow them. An eagle dashed down at the flock of birds as they were just going out of our sight, but, as we saw him rise upwards again empty handed, he must have missed his aim.

By this time it was near mid-day, and the clouds were gathering on the mountain-top, and gradually approaching us. We had taken little note of the weather during our pursuit of

the birds, but it was now forced on our attention by a keen blast of wind which suddenly swept along the shoulder of the mountain, here and there lifting up the dry snow in clouds. "We must make our way homewards at once," said L. "Deed, ay! it will no be a canny night," was the shepherd's answer. Just as we were leaving the bare stones a brace of ptarmigan rose, one of which I knocked down: the bird fell on a part of the snow which sloped downwards towards a nearly perpendicular cliff of great height: the slope of the snow was not very great, so I ran to secure the bird, which was fluttering towards the precipice: the shepherd was some little distance behind me, lighting his everlasting pipe; but when he saw me in pursuit of the ptarmigan he shouted at me to stop: not exactly understanding him, I still ran after the bird, when suddenly I found the snow giving way with me, and sliding "en masse" towards the precipice. There was no time to hesitate, so, springing back with a power that only the emergency of the case could have given me, I struggled upwards again towards my companion. How I managed to escape I cannot tell, but in less time than it takes to write the words I had retraced my steps several yards, making use of my gun as a stick to keep myself from sliding back again towards the edge of the cliff. The shepherd was too much alarmed to move, but stood for a moment speechless; then recollecting himself, he rushed forward to help me, holding out his long gun for me to take hold of. For my own part, I had no time to be afraid, and in a few moments was on terra firma, while a vast mass of snow which I had set in motion rolled in an avalanche over the precipice, carrying with it the dead ptarmigan.

I cannot describe my sensations on seeing the danger which I had so narrowly escaped: however, no time was to be lost, and we descended the mountain at a far quicker rate than we had gone up it. The wind rose rapidly, moaning mournfully through the passes of the mountain, and frequently carrying with it dense showers of snow. The thickest of these showers,

however, fell above where we were, and the wind still came from behind us, though gradually veering round in a manner which plainly shewed us that it would be right ahead before we reached home. Every moment brought us lower, and we went merrily on, though with certain anxious glances occasionally to windward. Nor was our alarm unfounded, for just as we turned a shoulder of the mountain, which brought us within view of the shepherd's house perched on the opposite hill-side, with a good hour's walk and the river between us and it, we were met by a blast of wind and a shower of snow, half drifting and half falling from the clouds, which took away our breath, and nearly blew us both backwards, shutting out the view of everything ten yards from our faces.

We stopped and looked at each other. "This is gey an sharp," said the shepherd, "but we mustna lose time, or we'll be smored in the drift; so come on, sir:" and on we went. Bad as it was, we did not dare to stop for its abating, and having fortunately seen the cottage for a moment, we knew that our course for the present lay straight down the mountain. After struggling on for some time we came to a part of the ground which rather puzzled us, as instead of being a steep slope it was perfectly flat; a break, however, in the storm allowed us to see for a moment some of the birch trees on the opposite side of the river, which we judged were not far from our destination. The river itself we could not see, but the glimpse we had caught of the trees guided us for another start, and we went onwards as rapidly as we could until the storm again closed round us, with such violence that we could scarcely stand upright against it. We began now at times to hear the river, and we made straight for the sound, knowing that it must be crossed before we could reach home, and hoping to recognize some bend or rock in it which would guide us on our way.

At last we came to the flat valley through which the stream ran, but here the drift was tremendous, and it was with the utmost

difficulty that we got to the water's edge. When there, we were fairly puzzled by the changed aspect of everything ; but suddenly the evening became lighter and the drifting snow not quite so dense. We saw that we should soon be able to ascertain where we were, so we halted for a minute or two, stamping about to keep ourselves from freezing. My poor dog immediately crouched at our feet, and curling himself up lay down ; in a few moments he was nearly covered with the snow : but the storm was evidently ceasing, at any rate for a short time, and very soon a small bit of blue sky appeared overhead, but in a moment it was again concealed by the flying shower. The next time, however, that the blue sky appeared, it was for a longer period, and the snow entirely ceased, allowing us to see our exact position ; indeed we were very nearly opposite the house, and within half a mile of it. The river had to be crossed, and it was impossible to find the stepping-stones : but no time was to be lost, as a fresh drift began to appear to windward ; so in we went, and dashed through the stream, which was not much above knee-deep, excepting in certain spots, which we contrived to avoid. The poor dog was most unwilling at first to rise from his resting-place, but followed us well when once up.

We soon made our way to the house, and got there just as another storm came on, which lasted till after dark, and through which, in our tired state, we never could have made our way. Donald and the shepherd's family were in a state of great anxiety about us, knowing that there would have been no possible means of affording us assistance, had we been bewildered or wearied out upon the mountain. The shepherd himself was fairly knocked up, and could scarcely be prevailed upon to take either food or drink, or even to put off his frozen clothes, before flinging himself on his bed. For my own part, I soon became as comfortable as possible, and slept as soundly and dreamlessly as such exercise only can make one do. I must candidly confess, however, that I made an inward vow against ptarmigan shooting again upon snow-covered mountains.

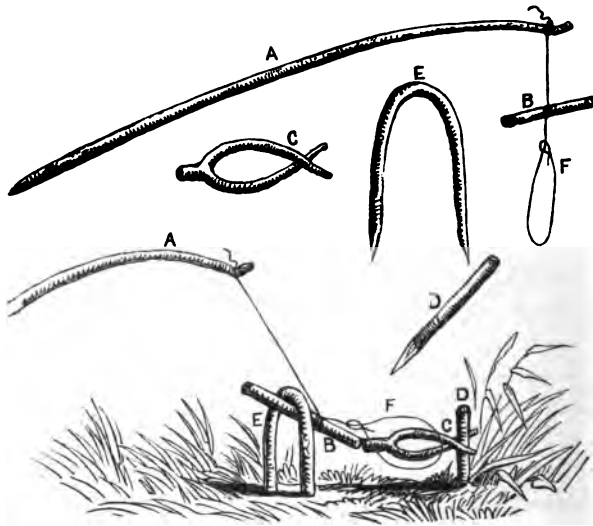
No person who has not been out in a snow-storm on lofty and exposed ground can form an idea of its force, and the difficulty there is in ploughing through the drifts and deep places ; I certainly had no conception of what it was until that day. A change of weather came on during the night, and by noon the next day all was again bright and clear, and we reached home with little difficulty. The wind and drift had been much less severe near the house, and the tops of the trees were still covered with masses of snow, which the wind had not been powerful enough to dislodge.

In conclusion, I may say I have aimed neither at book-making nor at giving a scientific description or arrangement of birds and other animals. All I wish is that my rough and irregularly put together notes may afford a few moments of amusement to the old ; and to the young not amusement only, but perhaps an incitement to them to increase their knowledge of natural history, the study of which in all its branches renders interesting and full of enjoyment many a ramble and many an hour in the country which might otherwise be passed tediously and unprofitably. We all know that there is scarcely a foot of ground that is not tenanted by some living creature, which, though it may offer itself to our observation in the lowly shape of an insect or even a minute shell, is as perfect in all its features and parts, in its habits and instincts, and as demonstrative of the surpassing wisdom and power and goodness of the Creator, as the most gigantic quadruped which walks the earth.

NOTE TO JANUARY.

TRAP FOR WOODCOCKS.

Jan. 31.—Under the tuition of an old man I used to catch snipes and woodcocks in a trap like this very successfully.



- A. Rod like a mole trap stick.
- B. Short piece of stick.
- C. Forked stick with one end passed through the other.
- D. Straight stick.
- E. Bent stick.
- F. Hair snare.

A, by pulling on B, presses it against the forked stick C, which in turn is pressed against the upright stick D, and this keeps it all in place. But on a bird stepping on the forked stick C, the weight of the bird loosens its hold, and the long stick A flies up, catching the victim in the snare, which is laid flat on the forked stick C.

INDEX.

- Accentor modularis*, 115.
 Accident when sporting, 306.
Accipiter nisus, 114.
 Acorns, wild ducks feed on, 249.
 Affection of wild ducks and other birds for their mates, 34.
 Age of birds, on the comparative, 233.
Alauda arvensis, 45.
Alca alle, 4; *torda*, 202.
Alcedo ispida, 98.
Ampelis garrulus, 259.
Anas boschas, 7.
 Angler, the London angler on the Find-horn, 236.
Anser brachyrhynchus, 43; *erythropus*, 103, 244; *ferus*, 43, 120; *segetum*, 42.
Anthus obscurus, 46; *pratensis*, 46.
Aquila chrysaetos, 98.
Archibuteo lagopus, 251.
 Arctic fern, 105.
Arvicola riparia, 275.
Astur palumbarius, 258.
 Attitude of hawks, 63.
 Auk (Little), an irregular visitor, 4.
Aurora borealis, 86-87.
 Autumn, pleasures of, 263; sportsman's walk, 264.
 Badger eats young rooks, 133; cunning of, 146; habits of, 147.
 Badgers leave holes, 41; hunting, 61.
 Bantam hen, brood of wild ducks reared by, 97.
 Bass and the solan geese, 204.
 Bank-martin, habits of, 89.
 Beagles and their pursuit of roebuck, 83.
 Beaks of various birds peculiarly adapted for feeding, 78.
 Bean-geese, arrival and habits of, 42, 43; pursuit of, 100.
 Ben Laighal, 157.
Bernicla brenta, 43; *leucopsis*, 75.
 Bernicle goose, 75.
 Bewick's swan, 72.
 Birds, indiscriminate slaughter of small, 19.
 Birds of prey, their destruction, 51.
 Bittern, 301.
 Blackbird and sparrow-hawk, 108; nest and habits of blackbird, 109.
 Black-cap, song of, 126.
 Blackcocks in winter, 300.
 Black game, habits of, 220; battle of cocks, 221.
 Blade-fish, 213.
 Black-headed gull, nesting places, 154; habits of, 155.
 Blue-cap useful to forester, 20.
 Bracelet, antique found among sand-hills, 272.
 Brambling or mountain-finch, 281.
 Braxy mutton, 317.
 Brent goose, habits of when wild and in captivity, 44; how to shoot when alarmed, 85.
 Brown-lug, a variety of trout, 152.
Bubo maximus, 299.
 Buckland (Mr. F.), on water-ouzel, 88.
 Buckman (Prof.), on the services of tom-tit to forester, 20.
 Bullfinch, its song and habits, 119.
 Bunting (black-headed), 21.
Buteo vulgaris, 251.
 Butterflies, exclusiveness in locality of some, 208.
 Buzzard, common, 251; rough-legged, 251; honey, 251.
 Buzzards and dead cat, 48.
Calamodyta phragmitis, 148.
Calidris arenaria, 174.
 Campbell, Major, 23d Fusiliers, 305.
Caprimulgus Europæus, 222.
 Carrier pigeon, instinct of, 47.
 Carrion birds, how attracted, 49.
 Carrion crow, 58.
 Cartridges sometimes mixed, 16.
 Cat, gray cat caught in trap, 146.
 Cats, wild, destroy rabbits, 41.
Certhia familiaris, 149.
 Chaffinch, its beautiful nest, 117; usefulness of, 118.
Charadrius curonica, 207; *hiaticula*, 206; *morinellus*, 205; *pluvialis*, 293.
Chelidon urbica, 90.
 Chimney swallow, habits of, 90-91.
Cinclus interpres, 281.
Circus cyaneus, 219.
Clangula glaucion, 26.
Coccothraustes vulgaris, 119.
 Cockburn (Lord) on habits of crow, observed at Caroline Park, 59.
 Cockles, how sheldrake extracts cockles from sand, 73.

- Cod taken during herring fishery, 176.
 Colour, change of, in fish, 25.
 Colour useful to birds in concealing them from their enemies, 52.
Columba livia, 168; *pallumbus*, 1; *turtur*, 169.
Colymbus arcticus, 290; *glacialis*, 139; *septentrionalis*, 291.
 Coot, its nest and habits, 140; tameness of, 141; flight of, 57; claws of, 189.
 Cormorant, 171; fishing with, 172.
 Corn-bunting, 84; good eating, 85.
 Corn-crake, 118, 231.
Corvus corax, 46; *cornix*, 58; *corone*, 58; *frugilegus*, 61; *monedula*, 95.
Coturnix communis, 242.
Cotyle riparia, 89.
 Cow and landrill, 118.
 Crabs changing their shells, 208; male crab protecting female, 209.
 Crake, spotted, 248; common, 118.
 Creeper, its habits, 149; its nest, 150.
 Crossbill, nest and young of, 124-125; a tame, 76; at Dulsie, 85.
 Crow leaving nest, 96.
 Crows, clamour of, 49; destroy much game, 51; instinct in dropping shell-fish, 106.
 Cuckoo, arrival and habits of, 122-124.
Cuculus canorus, 122.
 Cumming (Sir A. Gordon of Altyre) on heronry, 55. See memoir.
 Curlew, food and habits, 28; nest, 22; pigmy, 228.
 Curlews and red-shanks warn wild-fowl of danger, 50.
Cygnus Bewickii, 72; *ferus*, 71.
Cypselus apus, 91.
 Dabchick, habits of, 76.
Dafila acuta, 66.
 Dead bodies, instinct of raven in discovering, 47.
 Deal-fish, 218.
 Deer, escape of, 237. See Red-deer, Stag, Roebuck.
 Diver, black-throated, 290; red-throated, 291; northern, its manner of fishing, 139.
 Diving birds, 63.
 Dog, care of, when shooting in winter, 302.
 Dottrel, its peculiar habits, 205; feathers used by fly-dressers, 206.
 Doveky, 202.
 Down about nests of water-fowl, 16.
 Duck, omnivorousness of wild, 223; peculiar nesting place of wild, 97.
 Ducks feeding after swans, 305; feet of, 27.
 Duck tribe in spring, how to be prepared for cooking, 27.
 Dulsie, favourite fishing-place, 121.
 Dun-diver, 289.
 Dunlin, its eggs and breeding places, 150; habits, 151.
 EAGLE, quick eye of, 48.
 Eagle and strawberries at Ury, 170.
 Eagle-fisher, or osprey, 135.
 Eagle-owl, 299.
 Eels appearing, 87; favourite food of otter, 56; curious instinct of, 165.
 Eider-duck and its down, 67.
 Eley's cartridges, 17, 305.
Emberiza citrinella, 21; *miliaria*, 84; *schaenicus*, 21.
 Equilibrium and proportion in productions of nature, 50.
Erythacus rubecula, 115.
Falco gyrfalco, 60; *peregrinus*, 128.
 Fascinating powers of snake, 297.
 Fat protecting dogs from cold better than hair, 65; quantity of on swan, 45.
 Feet of hawks, 23.
 Fieldfare, food of, 21; build in large societies in Norway, 22.
 Fieldfares feeding on turnips, 36.
 Field mice, shutting up mouths of their holes, 85; large headed, destructive, 36, 275.
 Field mouse, habits of long-tailed, 250.
 Finch, mountain or brambling, 281.
 Findhorn, rapid changes in depth, 193.
 Finnock of the Findhorn, a sea-trout, 236.
 Fish, change of colour in, 25.
 Fishing of Terns, 105.
 Flood, on Findhorn, 194-197.
 Flounders, old man spearing, 275.
 Flounders, habits of, 268, 173; where to find, 189.
 Fly catcher, nest of, 121.
 Food, instinct of birds in finding, 53.
 Foot of heron, 28.
 Forbes, 308.
 Fox kills wild-ducks, 9; regularly hunts for maimed ducks, 14; hole and prey of, 174; cunning of, 309.
 Foxes, aged, 234; large on sand hills, 271; careful of tails, 278.
Fratercula arctica, 202.
Fringilla borealis, 191; *coelebs*, 117; *canabina*, 118; *carduelis*, 118; *chloris*, 117; *flavirostris*, 118; *montifringilla*, 281; *linaria*, 190; *spinus*, 110.
 Frogs and mallards, 77.
 Frogs and their enemies, 296.
 Frost-bite, instance of, 37.
Fulica atra, 140.
Fuligula cristata, 145; *marila*, 67.
Gallinago gallinula, 229; *media*, 92.
Gallinula chloropus, 68.
 Gannets, 204.
 Garden birds, 144.
 Garden, ducks useful in, 9.
 Geese, sense of smell in, 49; arrival of flocks in Findhorn bay, 79; stalking wild, 102; bean and pink-footed feeding on marsh grass, 42.
 Glengarry, falcon breeding in, 60.
Glyceria fluitans and *G. aquatica*, grasses eaten by swans, 246.
 Goatsucker or nightjar, 223.
 Godwit, habits of, 240.
 Golden-crested wren, 141.
 Golden eagle, habits of, 93, 94; followed by crows, 259.
 Golden eye in full plumage, 26; breeds in Norway, 27; flight and habits, 37.
 Golden plover, 293; habits of, 294; ascend slopes, 300.

INDEX.

- Goldfinch**, its nest and habits, 118.
Goosander, its habits, 265.
Gordonstown, great numbers of wild-fowl there, 57.
Goshawk, 358.
Graculus Linnaei, 208; *carbo*, 171.
Grantown-on-Spey, forest near, 20; 307.
Grebe (lesser), habits of, 76; peculiar feet, 77; Slavonian, 175.
Greenfinch, habits of, 117.
Greenland falcon, 61.
Green-shank, cry of and habits of, 207.
Grilse in rivers, 163.
Grouse, nest and habits, 217, 218; best months for, 229; disease in, 218; how to detect, 214, *note*; shot before the legal time, 215; trapped by shepherds, 249.
Grouse-shooting, pleasures of, 216.
Guillemot, common, 201; bridled, 201; black, 201.
Guinea-pig, quick sense of smell, 87.
Gull, common, 198; kittiwake, 199; black-toed, 199; great black-backed, 77; little, 112.
Gulls, a pest to sportsmen, 100; destroy corn, 134.
Gurnet and sand-eels, 173.
Haddock-fishing, 186.
Hæmatopus ostralegus, 10, 11.
Hair-worm, 164; popular belief of origin, 165, *note*.
Haliæetus albicilla, 232.
Hancock on feeding snipes and sand-pipers, 79.
Harelda glacialis, 9, 10.
Hares, peculiar habits of, 292.
Hawfinch, 119.
Hawk, male feeds his mate when sitting, 96.
Hawks, how to capture the more courageous kinds, 157; feet and claws of, 28; when they carry off young wood-pigeons, 52.
Hawking, training of hawks, 256, 257.
Hedge-sparrow, food and habits, 115.
Hen-grouse in a trap, and affection of mate, 84.
Hen-harrier, its flight and habits, 219; destroys grouse, 220.
Heron, foot of, 28; bill a dangerous weapon, 54; breeding, 55, 56.
Herons in autumn, 268.
Heronry at Altyre, 55.
Herring fishery, 176-186.
Herrings, enemies of, 177; not migratory, 204.
Herring gull, breeding place, 81; food of, 32.
Highlanders at herring fishery, 177-179.
Hirundo rustica, 90.
Holland, remark of Lord H. on nightingale, 208, *note*.
Holly, guinea-pig fond of, 87.
Honey-buzzard, 251.
Hooded crow destructive to wild-fowl, 58; habits of, 59.
Hooper or wild swan, 71; habits of, 72.
Hoopoe, one shot at Golspie, 190.
House-martin, arrival and habits of, 90.
House-sparrow,
Hurricane, sea-g
Hydrobata Cinch
Hypotrorchis ces
Iceland falcon, 61.
Instinct of conce
Jackdaw and egg
Jack-snipe, 92, 2
Kestrel or wind
Kingfisher on Fi
Kite, beautiful f
Kittiwake gull, 1
Knot, or ash-col
Lag-goose, habit
Lagopus Scoticus,
Lampreys, group
Landrail, moven
 fearless bird, 2
Language of sign
 animals, 50.
Lapwing, habits
Lark pursued by
Larus argentatus
marinus, 77; 1
184, 155.
Laughing-goose,
Limosa ægecephala
Linnet, habits of
119.
Lochlee, advent
 swan, 69, 70.
Long-tailed duck
Lophius piscatori
Loxia curvirostra
Magpie, habits o
Mallard omnivo
 when uneatab
 make salmon f
Mareca penelope,
Merganser, red-t
Mergellus albellus
Mergus merganse
Merlin, a favouri
127.
Merlins pursuing
"Merry dancers,
Midges, torment
Migrations of fis
Milvus regalis, 2
Missel thrush, sc
"Mocking-bird",
Moor-hen, habit
Mortality in gro
Motacilla campe
phurea, 311; 1
Mus sylvaticus, 2
Muscicapa grisola
Naver Loch, wid
Nests of birds, 1
Nightingale at H
Night-jar, habits
Numenius arquai
Nyctale funerea, 1

Nyctea nivea, 299.

Nyroca ferina, 24.

Oidemia fusca, 270; *nigra*, 270.

Ortygometra, *cres.*, 113; *porzana*, 248.

Osprey, feet of, adapted for holding fish, 29; nest in Sutherlandshire, 135; in Glenmore, 139; visit to its haunts, 158, 162.

Otter, skin of live otter never wet, 66; when rivers full of ice frequents springs, 30; boldness in defending young, 81; feeding young, 81; at Spynie, 57; habits of, 38; killed, 225; battling for her young, 283; trained to catch trout, 284; difficult to approach in day time, 285; no great enemy to salmon, 286; in winter, pursuit of, 304.

Otus brachyotus, 297; *vulgaris*, 111.

Owl, colour protects, 52; horned, eggs of in a crow's nest, 8; short-eared, 297; white, 298; snowy, 299; tawny, 114; white, introduced from England, 298; nest of long-eared, 111; kills pigeons, 112.

Owls, claws, large ears, stealthy flight, 29; destroy mice and rats, 29; useful to man, 295.

Oyster-catcher, habits of, 10; dive and swim well, 11; bill of, 11.

Oyster-catcher and whimbrel, peculiarity in flight, 82.

Oyster-catchers on mussel-scalps, 269.

Passer domesticus, 148; *montanus*, 148.

Partridge and the 1st of September, 225; habits of, 226, 227; covers nest and eggs, 126.

Partridges in hard frost, 5.

Partridge and quail, colour conceals, 52.

Parus ater, 18; *cærules*, 8; *caudatus*, 18; *cristatus*, 20; *major*, 17; *palustris*, 17.

Peewit, breeding and habits of, 101; first appearance, 88.

Peregrine Falcon, nest and young, 157; a tame one, 170; nest of, 121; habits of, 128, 130; strikes down wild-duck, 9; how it should be stuffed, 99; pursuing wild-duck, 255; a large specimen, 308.

Pernis apivorus, 251.

Pet ravens dangerous to children, 47.

Phalarope, red-necked, 156.

Pheasant, habits of, 260, 262; colour conceals, 62.

Phasianus colchicus, 260.

Phylomachus pugnax, 241.

Phoca vitulina, 272.

Pica caudata, 88.

Pictarnies' loch, why so called, 155, note.

Pike not detrimental to sport, 81.

Pink-footed goose feeds separate from bean-geese, 86; habits of, 48.

Pin-tail duck, flight and habits, 66, 67.

Plectrophanes nivalis, 280.

Plover, golden, 298.

Poaching, wholesale, 215.

Poachard, affection for mate, 84; breeding of, 85; feeds under water, 85; tamed easily, 87, 68, 74; peculiar colour of eye, 58; return of tame, 169.

Podiceps cornutus, 175; *minor*, 76.

Potatoes (diseased) food of wild-ducks, 7, 40.

Potentilla anserina eaten by wood-pigeon, 2.

Pratincola rubetra, 147; *rubicola*, 148.

Ptarmigan, colour, conceals, 52; its haunts and habits, 188; pursuit of in winter, 313.

Puffin and its breeding place, 202.

Punt and swivel-gun shooting, condemned, 303.

Purre or dunlin, 150.

Pyrrhula rubicilla, 119.

Quail, peculiarities of, 243.

Querquedula crecca, 15, 16.

Rabbit eating sea-weed, 15.

Rabbits destroy oaks and hollies, 250; on the bar, 164; in a flood, 196; large on sand hills, 271; destructiveness of, 308.

Ragweed, and seeds of other weeds destroyed by wood-pigeon, 2.

Rallus aquaticus, 12.

Raven, its breeding place, 46; its food, its peculiar instincts and habits, 47.

Razorbill and nest, 202.

Redbreast, familiarity of, 115; quarrelsome, 116.

Red-deer, age, of, 235; pursuit of, 239.

Red-deer and shepherds' patch of corn and potatoes, 54.

Redpole, lesser, 190; mealy, 191.

Red-shank, spring whistle, 11; nest of, 12; warns other birds of the approach of sportsman, 12.

Redstart, a rare visitor, 122; breeds at Craigcrook, 122, note.

Redwing, good eating, 22.

Reed-bunting, food, nest and habits, 21.

Regularity in appearance and disappearance of birds, 207.

Regulus cristatus, 141; *R. ignicapillus*, 142;

R. modestus, 143.

Retriever and wild-duck shooting, 13.

Retriever, use of a first-rate, 302.

Rhiconnich in Sutherland, 158.

Ring-dottrel, its habits, 206.

Ring-ouzel, 109.

Rissa tridactyla, 199.

Rock-pigeons, shooting, 167; their habits, 168.

Rock-pipit, 46.

Roe, habit of chasing each other, 192.

Roebuck, activity and cunning of, 33; boldness of tame, 54; killed at Darnaway, 96; destructive to young oaks, 250;

feeding, 279; winter covering, 237; in winter, 300.

Rocks building, 61; their good and bad deeds, 62; in the snow, 30.

Roseate Tern, 105.

Rose-coloured starling, 166.

Ruff, a rare visitor, 241.

Ruticilla phœnicura, 123.

Salmo ferox, destructive to trout, 81.

Salmon diminishing in numbers, 163.

Salmon and fly-fishing, 153.

Salmon-fishers on sea shore, 274.

Sand-eel, swiftness of, 30; food of tern, 30.

Sand-hills, origin of, 271.

Sanderling, 174.

- Sand-martin, arrival of, 89.
 Sandpiper, ash-coloured, 228; common, restlessness and habits of, 24; purple, tameness of, 23.
 Sandpipers, 227.
 Saw-fish, 213.
Saxicola cinerea, 83.
 Scaup-duck, habits of, 68.
 Scenting powers of wild ducks, 48.
Scolopax rusticola, 210.
 Scoter, duck, 270.
 Sea-angel, sea-angler, sea-devil, fish so called, 209.
 Sea-birds, nesting places of various, 300.
 Sea-eagle, a white variety, 232.
 Sea-fish taking fly, 167.
 Sea-fisheries, how to improve, 186.
 Seal, habits of, 272; tenacity of life, acute scent and curiosity of, 278; great enemy to the salmon-fisher, 287; flocks of playing and fighting, 288; how to shoot, 288.
 Sedge-warblers, 147-148; sing at night, 149.
 Shag-scarf, 208.
 Sheep on inaccessible places, 168; age of, 236.
 Sheldrake, walk and habits of, 78; instinct of female, 294.
 Shore birds in July, 174.
 Shoveller duck, nest of, 134, 151; habits of, 145.
 Sight more than smell useful to carrion-eating birds, 48.
 Siakins breeds in Moray, 110; tameness of, 111.
 Skua, arctic, robbing gulls, 199.
 Sky-lark, singing of, 45; its food, 46.
 Smew, habits of, 175.
 Snake fascinate frogs, 296.
 Snipe, nest and habits of, 92, 93.
 Snow bunting, its habits, 280.
 Snowy month, February, the most, 26.
 Solan goose, 208.
Somateria mollissima, 67.
 Sparrow, habits of common, and tree, 143.
 Sparrow and vermin-killer, 19.
 Sparrow-hawk, habits of, 114; pursues tame pigeons, 115.
Spatula clypeata, 145.
 Spring, signs of approach, 60.
 Spynie, wild-fowl shooting at the Loch of, 40, 301; wedgeon, 5; castle, 301.
 Stag warned by grouse or plover, 50; boldness of domesticated, 54.
Stercorarius parasiticus, 199.
Sterna hirundo, 104; *macroura*, 105; *minuta*, 106; *paradisæa*, 105.
 Stalking wild geese, 102.
 Starling, habits of, 247.
 Stint, little, 24.
 Stoat, milk-white, 4.
 Stoat and rabbit beagles, 80.
 Stonechat, habits of, 148.
 Storm-cock, missel thrush, why so called, 32.
Strix flammea, 298.
 Strychnia, poisoning crows with, 166.
Sturnus vulgaris, 247.
Sula bassana, 203.
 Sussex sparrow-club, 19.
 Sutherland, peregrinations in, 135, 156.
 Swan, pursuit of wounded, 89; arrival of wild, 245, 276; habits of, 246; how to shoot, 247; wintering-place of, 289; arrival hailed by the Icelanders, 289; watching for wild swan on Lochlee, 68, 70.
 Swift, habits of, 91.
 Swimming of water birds, variety of manner, 68.
Sylvia atricapilla, 126; *curruca*, 144; *trochilus*, 181.
Syrnium aluco, 114.
Tadorna riponensis, 78.
 Taming of wild birds, 97.
 Teal, nest of, sometimes far from water, 15; pretty nest, 16.
 Teal's nest, 156; robbed by hooded crow, 166.
 Teal and young, 180.
 Tengmalm's owl, 299.
 Terns catch sand-eels, 80; habits of common, 104; of arctic, 105; of lesser, 106.
 Terrier and eels, 165.
Tetrao tetrix, 220.
 Thrush and snails, 107; habits of thrush, 108.
Tinnunculus alaudarius, 252.
 Titlark, habits of, 46.
 Titmice, useful birds in a garden, 19.
 Titmouse, blue, useful to gardener, 3; eats dead mice and rats, 3; a bold little bird, 4; useful to forrester, 20; cole, 18; crested, 20; greater, eats walnuts, 17; fond of blue-bottle flies, 17; long-tailed, habits, 18; nest, 19; marsh, nest and habits, 17.
 Toad, how it feeds, 88.
 Tomtit, a tame, 281.
Totanus calidris, 12; *glottis*, 307; *hypoleucos*, 24.
 Trawling for flat-fish, 186.
Trichurus lepturus, 213.
Tringa alpina, 150; *canutus*, 228; *maritima*, 23; *pustilla*, 24; *subarquata*, 228.
Troglodytes parvulus, 182.
 Trout, instance of hardness and tameness, 25; change of colour in, 25; instinct of, 78; a large trout, 80; in a flood, 197; spawning, 244.
 Trout and fly-fishing on Findhorn, 152-153.
 Trout-flies, 99, 120.
 Tufted duck, habits of, 145.
Turdus iliacus, 22; *merula*, 108; *musculus*, 107; *pilaris*, 21; *torquatus*, 110; *viscivorus*, 32.
 Turnips, fieldfares sometimes eat, 22; gulls sometimes eat, 81.
 Turnstone, habits of, 231.
 Turpentine, useful protection against midges, 193.
 Turtle dove, a rare visitor, 169.
 Tystie, 202.
Uria grylle, 201; *lachrymans*, 201; *troile*, 201.
Vanellus cristatus, 101.
 Velvet on horns of roe, 96.
 Velvet-duck, 270.

"Ven-ni-son," 276, 279.

"Vermin," beauty and interest of so-called, 51.

Wagtails, habits of, 310, 311.

Water-dogs, how to treat, 65.

Water-hen alights on trees, 68.

Water-ousel, song of, 37; nest of, 83-89; its haunts in October, 249; attacked by salmon-fishers, 283.

Water-rail, a wanderer, 12; retired habits, 13; concealed nest on Spynie, 13, 139; courage of, 295.

Waxwing, Bohemian, 259.

Weasel, courage of, 4.

Weather, fish foretell changes of, 165.

Wet, on imperviousness of plumage of water-fowl to, 65, 66.

Wheatear, habits of, 83; how entrapped in Sussex, 84, 205.

Whimbrel, 23.

Whinchat, song of, 147.

Whistling plover, 294.

White-fronted goose, its habits and pursuit, 103; search for, 243.

White hares, 86.

Whitethroat, cheerful song of, 144; its nest, 145.

Widgeon, nest of, 5; habits and description of, 6; feeding on clover fields, 86;

preponderance of drakes, 40; moulting of, 106; shooting, 40; peculiar whistle of, 40; shooting in autumn, 266.

Wild birds repay mischief to fields and orchards by destroying grubs, 282.

Wild ducks eating diseased potatoes, 7; breeding of, 7.

Wild duck covers eggs when leaving them, 8; keep in pairs, 8; domestication of, 9; rapid flight, 9; useful in garden, 9; directions to sportsmen how to find them in hard frosts, 13; building in a crow's nest, 7.

Wild swan, adventure with, 39. See Hooper.

Willow wren, nest and habits of, 131.

Winged wild fowl, observations on, 64.

Wood-pigeon feeds on leaf of turnip, 1; other kinds of food, 1; nest of, 1, 2; how to shoot them, 2; difficult to domesticate, 2; increase of, 52.

Woodcock breeding, 210; how young are carried, 211; beak of, 211; woodcock's nest, 164, 189; trap, 326.

Woodcocks in March, 80.

Wren, cry, nest, and habits of, 132, 133.

Wrens, many, together, 37.

Wryneck, 149.

Yellow-bunting, habits, 21.

Yunc torquilla, 149.

SCIENTIFIC INDEX

OF

THE VERTEBRATED ANIMALS DESCRIBED OR ALLUDED TO.

MAMMALIA.

- Felis catus*. Wild cat, 41.
Vulpes vulgaris. Fox, 9, 174, 287, etc.
Mustela vulgaris. Weasel, 4.
Meles Taxus. Badger, 41, 61, 133, etc.
Lutra vulgaris. Otter, 38, 283, etc.
Calocephalus vitulinus. Seal, 272, 287, etc.
Mus sylvaticus. Field mouse, 85, 250, etc.
Arvicola riparia. Meadow vole, 36, 275.
 See an interesting paper on the Fauna of Moray, by the Rev. G. Gordon, in "the Zoologist," for information about this large headed vole so destructive to newly-planted larches, p. 425.
Lepus cuniculus. Rabbit, 15, 271, etc.
 — *timidus*. Hare, 292.
 — *variabilis*. Scotch Hare, White Hare, 86.
Capreolus Caprea. Roebuck, 33, 54, 300, etc.
Cervus Elaphus. Stag or Red Deer, 50, 285, etc.

BIRDS.

ORDER ACCIPITRES.

- Aquila Chrysaetos*. Golden Eagle, 93, 94.
 The Rev. George Gordon, in his Fauna of Moray, (Zoologist, p. 503), refers to a splendid specimen having been trapped in 1843, on Lord Cawdor's moors in the Streens on the Findhorn. Mr. Gordon adds, "when a nest with young has been discovered, a most barbarous practice is in some places adopted. The poor fledgelings are maimed, shackled, or have ligatures tied tightly around different parts of their bodies, so as to make them keep up a constant screaming. The parents, thinking that this arises from the cravings of hunger, cease not to bring in a supply, chiefly of grouse, which being unheeded by the tortured

- family, are daily carried off by their inhuman tormentor in numbers, and with an ease not experienced by any other mode of poaching."
Pandion Haliaetus. Osprey, 158, 162, etc.
Haliaetus albicilla. Sea-Eagle, 232.
Buteo vulgaris. Common Buzzard, 251.
 "Its actual occurrence in this district was first ascertained by Mr. Foljambe, whose gamekeeper trapped three specimens in the hills between Rothes and Knockando."—Rev. G. Gordon, l. c. 504.
Archibuteo Lagopus. Rough legged-buzzard, 251.
Pernis apivorus. Honey Buzzard, 251.
Milvus regalis. Kite, 253.
Falco peregrinus. Peregrine falcon, 123, 130, etc.
Hypotriorchis Esalon. Merlin, 126, etc.
Tinnunculus alaudarius. Kestrel, 252.
 The Rev. Mr. Gordon puts in a word against the ruthless persecution of this bird in Morayshire, as it feeds chiefly on mice and insects. Zoologist, 504.
Astur palumbarius. Goshawk, 258.
Accipiter Nisus. Sparrow-hawk, 114.
Circus cyaneus. Hen-harrier, 219.
 In Morayshire "in common with the peregrine falcon, buzzard, and kite, has the name of *gled* applied to it. It is the male that is the *gray gled*."—Gordon, l. c. 504.
Nyctale nivea. Snowy owl, 298.
 The Rev. Mr. Gordon refers to one having been wounded and caught among the sands of Culbin, supposed to have been driven by a severe gale from the north-east from the Shetland Islands. Another was taken near Innes House about 1840.
Nyctale funerea. Tengmalm's owl, 299.
Bubo maximus. Great-eared or eagle owl, 299.
Syrnium aluco. Tawny owl, 114.

Otus vulgaris. Long-eared owl, 29.
 — *brachyotus*. Short-eared owl, 297.
Strix flammea. Barn or white owl, 298.

ORDER PASSERES.

Caprimulgus europæus. Nightjar or goat-sucker, 222.

Cypselus apus. Common swift, 91.

Hirundo rustica. Chimney swallow, 90.

Cotyle riparia. Sand-martin, 89.

Chelidon urbica. House swallow, 90.

Coracias garrula. Roller, said to have been killed at Ballindalloch in 1831 (*Zoologist*, 511).

Alcedo Ispida. Common kingfisher, 98.

Upupa Epopa. Common hoopoe, like the roller only an accidental stranger, 191.

Certhia familiaris. Creeper, 149.

The Rev. Mr. Gordon says, "accompanied by the golden crested wren and the three small species of titmice, the creeper is not the most inactive member of a lively, stirring, amusing, foraging party, often seen scouring the woods, but forming a scene to be described only by the pen of an Audubon," i.e. 511.

Troglodytes parvulus. Common wren, 132.

Calamodyta Phragmitis. Sedge warbler, 148.

Mr. Gordon also records this bird as singing throughout the whole nights of midsummer.

Sylvia cinerea. Whitethroat, 144.

Sylvia curruca. Lesser whitethroat, 144.

Sylvia atricapilla. Blackcap warbler, 126.

Sylvia hortensis. Garden warbler.

Sylvia Trochilus. Willow wren, 131.

Sylvia rufa. Chiff-chaff.

Sylvia sibilatrix. Wood warbler.

These two warblers are found in the province, according to Mr. Gordon's list on the authority of Mr. Foljambe.

Regulus cristatus. Golden-crested wren, 141.

Regulus ignicapillus, 142.

Saxicola cinerithes. Wheatear, 83.

Pratincola rubetra. Whinchat, 148.

Pratincola rubicola. Stonechat, 148.

Ruticilla phœniceura. Redstart, 122.

Grant Lodge, near Elgin, where it bred in 1834, 5, and 8, as first observed by Mr. Foljambe to the north of the Grampians. The Rev. Mr. Gordon, by consulting the second volume of Macgillivray's Birds, p. 307, may see that this beautiful bird occurs in other parts of Scotland beside Dumfries and Morayshire.

Erythacus rubecula. Redbreast, 115.

Acoonor modularis. Hedge-sparrow, 115.

Parus major. Great titmouse, 17.

Parus coerules. Blue titmouse or oxeye, 3.

Parus ater. Cole titmouse, 18.

Parus cristatus. Crested titmouse, 20.

Parus caudatus. Long-tailed titmouse, 18.

Motacilla Yarellii. Pied wagtail, 310.

Motacilla sulphurea. Gray wagtail, 311.

Motacilla flava. Gray-headed wagtail, 312.

Motacilla cinereipes, 311.

Anthus pratensis. Meadow-pipit, 46.

Anthus obscurus. Rock-pipit, 46.

Hydrobata cinclus. Common dipper or water-ouzel, 88, 249, 259, 283.

The Rev. Mr. Gordon says, "The rocks of Kellas on the Lossie is a favourite haunt of the ouzel; it was observed there by one of the water bailiffs to contend with the common trout in carrying off and eating the ova of the sea trout (*Salmo trutta*), even at the very time that the latter was lying and shedding its spawn on the 'redds' or spawning ground. From its known partiality to, and destruction of the spawn of the salmon tribe, this bird has probably obtained no enviable place in the following ancient distich:—

'The Gordon, the gulle, and the water-crow
 Are the three warst ills that Moray ever saw.'

The hooded-crow is sometimes erroneously substituted for the water-crow or ouzel in these lines. The former, it is believed, is a comparatively late importation from the western shores of Scotland, and in Moray has only increased in consequence of the extended plantations of fir which afford it shelter. The 'gulle' is *Chrysanthemum segetum*, a weed which must have been very destructive to corn-fields under the old system of husbandry: While the 'Gordon,' as well as the neighbouring Highland clans no doubt paid a visit to 'the bonny land of Moray,' where it is said that of old 'every man might take his prey.'—*Zoologist*, 506.

Turdus viscivorus. Missel thrush, 32.

— *phænicus*. Fieldfare, 21.

— *musicus*. Song thrush, 107.

— *illacus*. Redwing, 22.

— *torquatus*. Ring-ouzel, 110.

— *merula*. Blackbird, 108.

Muscicapa grisola. Spotted fly-catcher, 121.

Ampelis garrulus. Bohemian wax-wing or chatterer, 259.

Lanius excubitor. Great gray shrike.

Very rare, mentioned in Mr. Gordon's list.

Pica caudata. Magpie, 80.

Corvus corax. Raven, 46.

— *frugilegus*. Rook, 61.

Mr. Gordon refers to the rooks in Morayshire repairing to the hills and moors for a short time after the breeding season, either attracted by the crowberry or by some larvae, then making their appearance in these subalpine districts.

Corvus monedula. Jackdaw, 95.

— *corone*. Carrion crow, 58.

— *cornix*. Hooded crow, 58, etc.

"They here perform many of the offices assigned to the vulture in warmer climates, and have been known to attack and partially devour a wounded partridge the moment that they saw it

fell to the ground, after being carried away upon the wind about a quarter of a mile from the place where it rose and was shot at."—Rev. G. Gordon, l. c.
Pastor roseus. Rose coloured pastor, 166.

A very rare visitor.
Sturnus vulgaris. Starling, 247.
Coccothraustes vulgaris. Hawfinch, 119.
A very rare visitor.
Fringilla cœlebs. Chaffinch, 117.
montifringilla. Mountain finch or
 brambling, 281.

— *carduelis*. Goldfinch, 118.
 — *spinus*. Siskin, 110, etc.
 Mr. Gordon says—"There is a well-as-
 certain instance of the siskin having
 brought out its young at Elginshill,
 near Innes house."—*Zoologist*, 508.

— *chloris*. Greenfinch, 117.
 — *cannabina*. Common linnet, 118.
 Often called "the whin lintie."
 — *linaria*. Lesser redpole, 190.
 — *borealis*. Mealy redpole, 191.
 — *avivirostris*. Mountain linnet, 118.
Passer domesticus. House-sparrow, 143.

The Rev. Mr. Gordon gives an instance
 of this bird seizing and turning out
 the young of a chaffinch which had
 built in a pear tree trained on the front
 of a house in Elgin. After destroying
 the young the sparrow teased and tore
 up the nest.

— *montanus*. Tree-sparrow, 143.
Emberiza miliaria. Common bunting, 84.
 — *schœniclus*. Black-headed or reed
 bunting, 21.

— *citrinella*. Yellow bunting, 21.
 The "yellow yarling" often gets the
 name of "the devil's bird," and is
 almost invariably persecuted by chil-
 dren.—Rev. Mr. Gordon, l. c.

Plectrophanes nivalis. Snow bunting, 280.
Alauda arvensis. Skylark, 45.
Pyrrhula rubicilla. Bullfinch, 119.
Loxia curvirostra. Crossbill, 124, etc.

ORDER SCANSORES.

Picus major. Great spotted wood-pecker,
 met with, according to Mr. Gordon, in
 the woods of Castle Grant.
Cuculus canorus. Common cuckoo, 122.

ORDER COLUMBÆ.

Columba Palumbus. Ringdove, 1, etc.
 Mr. Gordon gives an instance of no less
 than twenty-eight ordinary sized acorns
 having been taken from the stomach
 of one bird killed at Cawdor.
 — *Livia*. Rockdove, 168, etc.
 — *Turtur* or *Turtur auritus*. Turtle-
 dove, 169.
 Mentioned by Mr. St. John as an occa-
 sional visitor.

ORDER GALLINÆ.

Perdix cinerea. Partridge, 225, etc.
Coturnix communis. Quail, 243.
 Elgin is supposed to be the most nor-
 thern locality visited by this widely
 diffused bird.
Tetrao Tetrix. Black grouse or black
 game, 220, etc.
Lagopus scoticus. Red grouse or moor-
 fowl, 217.
 — *albus*. Ptarmigan, 188, etc.

ORDER STRUTHIONES.

Otis tarda. The great bustard.
 The Rev. Mr. Gordon gives two instances
 of this bird having been shot or taken
 in the district.

ORDER GRALLÆ.

Vanellus cristatus. Lapwing, 101.
Squatarola helvetica. Gray plover.
Charadrius plumalis. Golden plover, 293.
 — *morinellus*. Dotterel, 205.
 — *hiaticula*. Ringed plover, 206.
Hæmatopus ostralegus. Oyster-catcher 10,
 82, etc.

Cinclus interpres. Turnstone, 231.
Ardea cinerea. Heron, 55, 268, etc.
 — *Garzetta?* Little Egret?

Mr. Gordon gives two instances of a bird
 like this having been seen in the dis-
 trict. He adds that the bones of a
 bird allied to, but not those of the
 common heron, have been found in the
 cave at Hopeman Quarry.

Botaurus stellaris. Common Bittern, 301.
Numenius arquata. Common curlew, 22.
 — *phæopus*. Whimbrel, 23.
Limosa cæcecephala. Black-tailed god-wit,
 240.

Totanus calidris. Red-shank, 12, etc.
 — *glottis*. Green-shank, 207.
 — (*Tringoides*) *hypoleucos*. Common
 sandpiper, 24.

Philomachus pugnax. Ruff, 241.
 A rare visitor.
Tringa canutus. Knot, 228.
 — *maritima*. Purple sandpiper, 23.
 — *alpina*. Purre or dunlin, 184.
 — *pusilla* (or *minuta*). Little stint, 24.
 — *subarquata*. Pigmy curlew, or cur-
 lew sandpiper, 228.

Calidris arenaria. Sanderling, 174.
Gallinago media. Common snipe, 92.
 — *gallinula*. Jack-snipe, 229.
Scolopax rusticola. Woodcock, 210, etc.
Phalaropus hyperboreus. Red-necked pha-
 larope, 156.
Rallus aquaticus. Water rail, 12.
Ortygometra Crex. Land-rail or corn crane,
 113, etc.
 — *Porzana*. Spotted crane, 248.
Gallinula chloropus. Water-hen, 68.
Fulica atra. Coot, 140.

ORDER ANSERES.

- Bernicla leucopsis*. Bernicle goose, 75.
 — *Brenia*. Brent goose, 43.
Anser ferus. Grey-lag goose, 43, 120, etc.
 — *segetum*. Bean goose, 42.
 — *brachyrhynchus*. Pink-footed goose, 43.
 — *erythropus*. White-fronted goose, 103.
 The Rev. Mr. Gordon remarks in "The Zoologist," p. 514, that flocks of various species of geese are seen, near Elgin, at short intervals, in the spring of every year. These are "flying almost invariably in a north-westerly direction, probably to their breeding-places in the northern shores of America. Instinct will tell them of a coming storm in the Northern Ocean, and make them halt for a little until it pass over. Hence an observation long ago made in this part of Scotland, that if the geese fly to the hill, the weather 'it will spill,' that is, get foul; but if they take to the sea, 'the weather it will be.'"
Cygnus ferus. Hooper or wild swan, 71.
 — *minor* (or *Bewickii*). Bewick's swan, 72.
Tadorna vulpanser. Sheldrake, 73.
Mareca penelope. Widgeon, 5, etc.
Dasila acuta. Pin-tail Duck, 66.
Anas boschas. Wild Duck, 7, etc.
Querquedula crecca. Teal, 15, 130, etc.
Spatula clypeata. Shoveller, 145.
Fuligula cristata. Tufted duck, 220.
 — *marila*. Scaup duck, 67.
Nyroca ferina. Pochard, 84.
Clangula glaucion. Golden-eye, 27, etc.
Harelda glacialis. Long-tailed duck, 9.
Somateria mollissima. Eider duck, 67.
Oidemia fusca. Velvet scoter, 270.
 — *nigra*. Common scoter, 270.
Mergus merganser (or *castor*). Goosander, 265.
 — *serrator*. Red breasted merganser, 232.
Marellus albellus. Smew, 175.
 A rare visitor.
Colymbus glacialis. Great northern diver, 139.
 — *arcticus*. Black-throated diver, 290.
 — *septentrionalis*. Red-throated diver, 291.
Podiceps cornutus. Slavonian grebe, 175.
 — *minor*. Little grebe, 76.
Alco torda, Razor-bill, 202.

- Fratercula arctica*. Puffin, 202.
Uria troile. Foolish Guillemot, 201.
 — *lachrymans* (or *Ringvica*). Ringed guillemot, 201.
 — *grylle*. Black Guillemot, 201.
Arctica (or *alco*) *alla*. Little Auk, 4.
Thalasidroma pelagica. Stormy petrel.
 "Seen frequently in the Moray Firth, and sometimes during a severe storm driven on shore."—Rev. G. Gordon, l. c. 515.
Stercorarius parasiticus. Arctic skua or black-toed gull, 199.
Larus marinus. Great black-backed gull, 77.
 — *fuscus*. Lesser black-backed gull, 134.
 — *argentatus*. Herring gull, 82.
 — *canus*. Common gull, 198.
 — *ridibundus*. Black-headed gull, 259.
 — *minutus*. Little gull, 112.
Rissa tridactyla. Kittiwake gull, 199.
Sterna paradisica. Roseate tern, 105.
 — *hirundo*. Common tern, 104.
 — *macroura*. Arctic tern, 105.
 — *minuta*. Lesser tern, 106.
Sula Bassana. Gannet or Solan goose, 203.
Graculus (or *Pelecanus*) *Carbo*. Cormorant, 171.
 — *Linnaei*. Shag, 203.

FISHES.

- Trigla* (species). Gurnet or Gurnard, 173.
Trichurus lepturus. Saw-fish, deal-fish, 231.
Lophius piscatorius. Angler or sea-devil, 210.
Esox Lucius. Pike, 81.
Salmo Salar. Common Salmon, 153, etc.
 Grilse on first return from sea, 163.
 — *Trutta*. Sea trout or Finnock, 163.
 — *Fario*. Common trout, 25.
 — *Ferox*. Great Lake trout, 81.
Clupea Harengus. Common Herring, 176, 186.
Morhua Callarias. Cod, 176.
 — *celestinus*. Haddock, 186.
Platessa Flesus. Flounder, 173, 263.
Anguilla (species). Eel, 56, 87, etc.
Ammodytes Tobiatus. Sand-eel, 30.
Lampetra fluviatilis. Lampren or River Lamprey, 98.

REPTILES.

- Rana temporaria*. Frog, 296.
Bufo vulgaris. Toad, 88.

FINIS.

SECOND EDITION.

In 2 vols. 8vo, with Maps and Illustrations, price 24s.,

LIFE IN NORMANDY:

SKETCHES OF FRENCH FISHING, FARMING, COOKING,
NATURAL HISTORY, AND POLITICS.

Drawn from Nature. Edited by J. F. CAMPBELL, Esq.

"It is one of those books which at once fascinate and humiliate the reader—the former because it is full of good matter, put in a most interesting light; the latter because the material and the interest are derived from such simple and obvious sources that we wonder to think how these good things have been missed so long."—*Times*.

"'Life in Normandy' is a most dainty work. To the intellectual epicure it will prove exceedingly appetising."—*Morning Post*.

"The freshness, the minuteness of description, the generous tone of feeling everywhere perceptible, the novelty given by the keen insight of the narrator, even to familiar objects, combine to render the book every way a satisfaction and a pleasure, whether to the naturalist, sportsman, or student of human nature."—*Globe*.

"A very pleasant and spirited account is this of the out-door and in-door life and occupations of our kith and kin across the channel."—*Reader*.

Third Thousand.

*In 2 Vols. crown 8vo, price 24s., with Portrait and graphic
Illustrations,*

"CHRISTOPHER NORTH:"

A MEMOIR OF JOHN WILSON,

Late Professor of Moral Philosophy in the University of Edinburgh.

Compiled from Family Papers and other sources, by his Daughter,
Mrs. GORDON.

"We do not believe that the most practised and able critic in Scotland could have done more to put Wilson's literary labours in a favourable light."—*Saturday Review*.

"We do not know that we have ever read a biography which has on the whole satisfied us better."—*Spectator*.

"The authoress has related its details with so much feeling and pathos, that, as a true expression of natural affection, to praise it would be impertinent."—*Times*.

"From his infancy to the hour of his death he displayed a force of character, a vigour of intellect, and a rectitude of conduct, deserving of admiration, and every portion of his life has been worthily recorded by his daughter."—*Observer*.

"His life was undoubtedly worthy to be written, and his daughter has written it in a manner which does justice to the subject, and does honour to herself."—*London Review*.

"Wherever the English tongue is spoken, will be hailed with pleasure this tribute to the memory of 'Christopher North.'"—*Sun*.

July 1863.

LIST OF WORKS

PUBLISHED BY

EDMONSTON AND DOUGLAS,

88 PRINCES STREET, EDINBURGH.

LORD DUNFERMLINE.

Memoir of Lieutenant-General Sir Ralph

Abercromby, K. B., 1793-1801. By his Son JAMES LORD DUNFERMLINE. In 1 vol. demy 8vo. Price 10s. 6d.

"The life of such a man is well worth studying; and through the judicious composition of this Memoir it may be studied easily. The book has the unusual merit of not containing a superfluous page."—*Saturday Review*.

JOHN ABERCROMBIE, M.D., Late First Physician to
the Queen for Scotland.

Essays and Tracts: the Culture and Discipline
of the Mind, and other Essays. New Edition, Fcap. 8vo,
cloth, 3s. 6d.

JOHN ANDERSON, D.D., F.G.S., E.P.S., &c., Author of
'The Course of Creation,' 'Geology of Scotland,' &c.

Dura Den, a Monograph of the Yellow Sand-
stone and its remarkable Fossil remains. Royal 8vo,
cloth, 10s. 6d.

Archæological Catalogue. Illustrated, royal
8vo, cloth, 21s.

Angelo Sanmartino, a Tale of Lombardy in
1859. Crown 8vo, cloth, 10s. 6d.

Ancient Leaves; or Metrical Renderings of
Poets, Greek and Roman. By D'ARCY WENTWORTH
THOMSON. 1 vol. fcap. 8vo, 6s.

Odal Rights and Feudal Wrongs: a Memorial
for Orkney. By DAVID BALFOUR of Balfour and Trenaby.
1 vol. 8vo, price 6s.

"This book is an interesting contribution to Scottish history."—
Athenæum.

JAMES BALLANTINE.

Poems. Fcap. 8vo, cloth extra, 3s. 6d.

R. M. BALLANTYNE.

How Not to Do It. A Manual for the
Awkward Squad; or, A Handbook of Directions, written
for the instruction of Raw Recruits in our Rifle Volunteer
Regiments. With Illustrations. Fcap., sewed, 6d.

The Volunteer Levee; or, the Remarkable
Experience of Ensign Sopht. Written and Illustrated by
Himself. Edited by the Author of 'How Not to do It.'
Fcap. 8vo, sewed, 1s.

CATHARINE D. BELL, Author of 'Cousin Kate's Story,'
'Margaret Cecil,' &c.

Aunt Ailie. Fcap. 8vo, cloth, 5s.

The Diary of Three Children; or, Fifty-two
Saturdays. Fcap. 8vo, 5s.

M. BETHAM EDWARDS, Author of 'The White House
by the Sea.'

Now or Never, a Novel. Crown 8vo, 10s. 6d.

Charlie and Ernest; or, Play and Work. A
Story of Hazlehurst School, with Four Illustrations by
J. D. Royal 16mo, 3s. 6d.

J. B.

British Birds drawn from Nature. By Mrs.
BLACKBURN. In 1 vol. folio. Price 10s. 6d. India
Proofs, 21s. 6.

"Scarcely ever before have our feathered relatives (for we are all somehow connected, of course—birds and beasts) found such an interpreter. If the ingratitude of princes is not to become proverbial, the Queen of the Birds—the bright-eyed, purple-vested, golden eagle—ought forthwith to decorate her portrait-painter in ordinary."—*Extract from Cornhill Magazine.*

JOHN STUART BLACKIE.

On Beauty. Three discourses delivered in
the University of Edinburgh, with an Exposition of the
Doctrine of the Beautiful according to Plato. By J. S.
BLACKIE, Professor of Greek in the University, and of
Ancient Literature to the Royal Scottish Academy, Edinburgh. Crown 8vo, cloth, 8s. 6d.

Lyrical Poems. By J. S. Blackie. Crown
8vo, cloth, 7s. 6d.

On Greek Pronunciation. By J. S. Blackie.
Demy 8vo, 3s. 6d.

Sir DAVID BREWSTER, K.H., A.M., LL.D., D.C.L.,
F.R.S., &c., &c.

Memoirs of the Life, Writings, and Discoveries of Sir Isaac Newton. With Portraits. New and Cheaper Edition, 2 vols., fcap. 8vo, cloth, 12s.

"Such works as Sir David Brewster's careful, though rather partial, biography, are of the utmost value in presenting a faithful summary of all that materially illustrates the character of the mind of our great philosopher."—*Quarterly Review*.

MARGARET MARIA GORDON (BREWSTER).

Lady Elinor Mordaunt ; or, Sunbeams in the Castle. Crown 8vo, cloth, 9s.

Letters from Cannes and Nice. Illustrated by a Lady. 8vo, cloth, 12s.

Work ; or, Plenty to do and How to do it. Thirty-third thousand. Fcap. 8vo, cloth, 2s. 6d.

Little Millie and her Four Places. Fcap. 8vo, cloth, 3s. 6d.

— Cheap Edition. Forty-sixth thousand. Limp cloth, 1s.

Sunbeams in the Cottage ; or, What Women may do. A narrative chiefly addressed to the Working Classes. Cheap Edition. Thirty-eighth thousand. Limp cloth, 1s.

Prevention, or an appeal to Economy and Common Sense. 8vo, 6d.

The Word and the World. Tenth Edition, 18mo, sewed, 2d.

Leaves of Healing for the Sick and Sorrowful.

Fcap. 4to, cloth, 3s. 6d. Cheap Edition, limp cloth, 2s.

The Motherless Boy; with an Illustration by

J. Noel Paton, R.S.A. Cheap Edition, limp cloth, 1s.

REV. JAMES D. BURNS, M.A.

The Vision of Prophecy, and other Poems.

Second Edition, fcap. 8vo, cloth, 6s.

JOHN BROWN, M.D., F.R.S.E.

Horæ Subsecivæ; Third Edition, 1 vol. fcap.

8vo, 7s. 6d.

"Of all the John Browns commend us to Dr. John Brown—the physician, the man of genius, the humourist, the student of men, women, and dogs.

"Dr. Brown's masterpiece is the story of a dog called 'Rab.' The tale moves from the most tragic pathos to the most reckless humour, and could not have been written but by a man of genius. Whether it moves tears or laughter, it is perfect in its way, and immortalizes its author."—*Times*.

Supplementary Chapter to the Life of the

Rev. John Brown, D.D. A Letter to the Rev. John Cairns, D.D. Second Edition, crown 8vo, sewed, 2s.

"It forms an indispensable appendix to the admirable memoir of Dr. Cairns, and it will, if possible, increase the love with which Dr. Brown's memory is cherished."—*Scottish Guardian*.

"There is a fresh luxuriance in the style, that charms and fascinates the reader."—*Glasgow Saturday Post*.

Arthur H. Hallam; Extracted from 'Horæ

Subsecivæ.' Fcap. sewed, 2s. cloth, 2s. 6d.

Rab and his Friends; Extracted from 'Horæ

Subsecivæ.' Thirty-ninth thousand. Fcap. sewed, 6d.

Our Dogs; Extracted from 'Horæ Subsecivæ.'

Fifteenth thousand. Fcap. sewed, 6d.

Rab and his Friends. By John Brown, M.D.

With Illustrations by George Harvey, R.S.A., J. Noel Paton, R.S.A., and J. B. In 1 vol. cloth, antique, price 5s.

“With Brains, Sir;” Extracted from ‘*Horæ Subsecivæ.*’ Fcap. sewed, 6d.

Memoirs of John Brown, D.D., senior Minister

of the United Presbyterian Congregation, Broughton Place, Edinburgh, and Professor of Exegetical Theology to the United Presbyterian Church, by the Rev. J. Cairns, D.D., Berwick, with Supplementary Chapter by his Son, John Brown, M.D. Fcap. 8vo, cloth, 9s. 6d.

SAMUEL BROWN.

Lectures on the Atomic Theory, and Essays,
Scientific and Literary, 2 vols., crown 8vo, cloth, 15s.

Rev. JOHN BRUCE, D.D., Minister of Free St. Andrew’s Church, Edinburgh.

The Biography of Samson. Illustrated and
Applied. Second Edition. 18mo, cloth, 2s.

J. F. CAMPBELL.

Popular Tales of the West Highlands, orally
collected, with a Translation by J. F. Campbell. 4 vols., extra fcap., cloth, 32s.

“One of the most careful records of oral language in existence.—*Knight’s English Cyclopædia.*”

“Mr. Campbell has published a collection of tales, which will be regarded as one of the greatest literary surprises of the present century. It is the first instalment of what was to be expected from any fair statement of the scientific value of popular tales. . . . It required some striking demonstration of the real worth of popular tales to arouse Gaelic scholars from their apathy. They have been aroused, and here is the first fruit, in a work that is most admirably edited by the head of a family beloved and honoured in those breezy western isles, who has produced a

book which will be equally prized in the nursery, in the drawing-room, and in the library."—*Times*.

"They are the 'Arabian Nights of Celtic Scotland,' and as such we recommend them as a present for the young."—*Critic*.

"We feel assured that Mr. Campbell's labours will be rewarded with such signal success as shall encourage him to extend them in every direction over the rich field which he has been the first to explore and cultivate."—*Spectator*.

"The book is one that no modern student can afford to miss, and that few persons of any age or degree of culture would not come to again and again."—*Daily News*.

F. H. CARTER.

Book-keeping, adapted to Commercial and Judicial Accounting, with Styles. By F. H. CARTER, Member of the Society of Chartered Accountants, Edinburgh. 8vo, cloth, price 10s.

REV. THOMAS CHALMERS, D.D., LL.D.

Life and Works of Rev. Thomas Chalmers ;
Memoirs by Rev. W. Hanna, LL.D. 4 vols, 8vo, cloth, £2 : 2s.

————— Cheap Edition, 2 vols, crown 8vo, cloth, 12s.

A Selection from the Correspondence of Dr. Chalmers, uniform with the Memoirs. Crown 8vo, cloth, 10s. 6d.

Posthumous Works, 9 vols, 8vo.—

Daily Scripture Readings. 3 vols., £1:11:6.

Sabbath Scripture Readings 2 vols., £1:1s.

Sermons. 1 vol., 10s. 6d.

Institutes of Theology. 2 vols., £1:1s.

Preflections on Butler's Analogy, etc. 1 vol., 10s. 6d.

Sabbath Scripture Readings. *Cheap Edition*, 2 vols, crown 8vo, 10s.

Daily Scripture Readings. *Cheap Edition*, 2 vols, crown 8vo, 10s.

ASTRONOMICAL DISCOURSES. *New Edition*, cloth, 2s. 6d.

————— *Cheap Edition*, limp, 1s.

COMMERCIAL DISCOURSES. Cheap edition, limp, 1s.

Lectures on the Romans. 2 vols., crown 8vo, 12s.
 Institutes of Theology. 2 vols., crown 8vo, 12s.
 Political Economy. Crown 8vo, 6s.
 Select Works, in 12 vols., crown 8vo, cloth, per vol., 6s.

Vols. I. and II.—Lectures on the Romans, 2 vols.
 Vols. III. and IV.—Sermons, 2 vols.
 Vol. V.—Natural Theology, Lectures on Butler's Analogy, &c.
 Vol. VI.—Christian Evidences, Lectures on Paley's Evidences, &c.
 Vols. VII. and VIII.—Institutes of Theology, 2 vols.
 Vol. IX.—Political Economy; with Cognate Essays.
 Vol. X.—Polity of a Nation.
 Vol. XI.—Church and College Establishments.
 Vol. XII.—Moral Philosophy, Introductory Essays, Index, &c.

Characteristics of Old Church Architecture,
 etc., in the Mainland and Western Islands of Scotland.
 In one vol. 4to, with Illustrations, price 25s.

"Alighting on a book that has discoveries in it is pretty nearly as good as making the discoveries for one's self. In either case, there is an impulse to come forward and let the fact be known, lest some other should be the first to make the revelation. It is thus that we are tempted, with more than usual promptitude, to notice this book, which contains valuable and striking novelties from an untrodden archæological ground. . . ."—
Scotsman.

Chronicle of Gudrun; a story of the North
 Sea. From the mediæval German; with frontispiece by
 J. Noel Paton, R.S.A. Crown 8vo, 9s.

NATHANIEL CULVERWELL, M.A.

Of the Light of Nature, a Discourse by
 Nathaniel Culverwell, M.A. Edited by John Brown, D.D.,
 with a critical Essay on the Discourse by John Cairns, D.D.
 8vo, cloth, 12s.

NORVAL CLYNE.

Ballads from Scottish History. By NORVAL
 CLYNE. Fcap. 8vo, price 6s.

PROFESSOR DALZEL.

The Annals of the University of Edinburgh.
 By ANDREW DALZEL, formerly Professor of Greek in the
 University of Edinburgh; with a Memoir of the Compiler,
 and Portrait after Raeburn. In two vols. demy 8vo,
 price 21s.

GEORGE WEBBE DASENT, D.C.L.

The Story of Burnt Njal; or, Life in Iceland

at the end of the Tenth Century. From the Icelandic of the Njals Saga. By G. W. DASENT, D.C.L. In 2 vols. 8vo, with Maps and Plans, price 28s.

"Considered as a picture of manners, customs, and characters, the Njala has a merit equal in our eyes to that of the Homeric poems themselves."—*Edinburgh Review*.

"The majority of English readers would have been surprised to be told that in the literature of Iceland there was preserved a story of life and manners in the heroic age, which for simple force and truthfulness is, as far as we know, unequalled in European history and poetry, and is not unworthy of being compared, not indeed for its poetic richness and power, but for the insight which it gives into ancient society, with the Homeric poems."—*Guardian*.

"A work, of which we gladly repeat the judgment of a distinguished American writer, that it is unsurpassed by any existing monument in the narrative department of any literature, ancient or modern."—*Saturday Review*.

"An historical romance of the tenth century, first narrated almost at the very time and by the very people to whom it refers, nearly true as to essential facts, and quite true in its pictures of the customs and the temper of the old Norsemen, about whom it tells, is in these volumes edited with the soundest scholarship by Dr. Dasent. There was need of a thorough study of the life and language of the early colonists of Iceland for the effective setting forth of this Njala, or saga of Njal."—*Examiner*.

"This 'Story of Burnt Njal' is worthy of the translator of the Norse Tales: a work of interest to the antiquary and the lover of legendary lore—that is, to every one capable of appreciating those sources of history which are at once the most poetic and the most illustrative of the character and growth of nations. The events of the story happened while the conflict of the two creeds of Christ and Odin was yet going on in the minds of the Northmen. We must pass the book over to the reader's attentive consideration, for there are few portions of it that are not pregnant with interest and instruction for a reflective mind."—*Athenæum*.

"Hurriedly and imperfectly as we have traced the course of this tale divine, it must be evident to all who have accompanied us in our progress that there is real Homeric stuff in it. The Saga has a double value, an æsthetic and an historic value. Through it we may learn how men and women in Iceland, near a thousand years ago, lived, loved, and died."—*Spectator*.

"Mr. Dasent has given us a thoroughly faithful and accurate translation of the 'Njala; or, the Story of Njal,' the longest and certainly the best of all the Icelandic Sagas. The style is that pure Saxon idiom with which the readers of his 'Norse Popular Tales' are familiar. To the translation are prefixed disquisitions on Iceland; its religion, constitution, and public and private life; and the appendix contains a very amusing essay on piracy and the Vikings, the biography of Gunnhilda, the wicked queen of Eric of the Bloody-axe, king of Norway, and afterwards warder of Northumberland, and a disquisition on the old Icelandic currency."—*Times*.

GEORGE WEBBE DASENT, D.C.L.

Popular Tales from the Norse, with an Introductory Essay on the origin and diffusion of Popular Tales.
Second Edition, enlarged. Crown 8vo, 10s. 6d.

Select Popular Tales from the Norse. New Edition, with Illustrations. 1 vol. crown 8vo, 6s.

"There has been no book published during the Christmas season which would form a more welcome present to the young, than this handsome volume of Norse stories."—*London Review*.

"Thrice happy the small folk into whose hands shall fall this charming story book! Beautifully printed on tinted paper, enriched with the most spirited engravings, and elegantly bound, a prettier volume will scarce be found in a collection of *éditions de luxe*."—*Spectator*.

JAMES DODDS.

The Fifty Years' Struggle of the Scottish Covenanters, 1638-88. Third Edition, fcap., cloth, 5s.

"The volume before us is by a Mr. Dodds, with whose name we were not previously acquainted. His Lectures on the Covenanters were addressed to popular audiences, and they are calculated to be exceedingly popular. . . . They have merits of their own; they are in passages very eloquent; they are full of graphic touches; they appeal with no small success to our sympathies; and, though we cannot endorse the leading idea of the book, we must do it all honour as an advance upon previous ideas on the same subject."—*Times*.

"This is an excellent little book, written in a large-hearted, earnest, pious, and thoroughly manly spirit. . . . The style is forcible, graphic, and robust; now and then perhaps a little stiff, sometimes pseudo-rhetorical, but, in general, well suited to the subject. . . . These men, whatever be the reader's prepossessions, are really worth eading about. There was manhood in them."—*Spectator*.

DUNBAR.

From London to Nice. A Journey through France, and Winter in the Sunny South. By Rev. W. B. DUNBAR, of Glencairn. 12mo, cloth, price 3s.

The Ferry Hills, a Poem in Three Cantos.
12mo, price 2s. 6d.

M. LAMÉ FLEURY, Auteur de plusieurs ouvrages d'éducation.
L'Histoire d'Angleterre racontée à la Jeunesse, augmentée d'une table analitique. 18mo, cloth, 2s. 6d.

L'Histoire de France, racontée à la Jeunesse.
18mo, cloth, 2s. 6d.

Rev. A. L. R. FOOTE, author of "Incidents in the Life of our Saviour."

Christianity viewed in some of its Leading Aspects. Fcap., cloth, 3s.

"It may seem high praise, when we state that sometimes, in the freshness, breadth, and definiteness of the author's thinking, we have been reminded of the posthumous lecture of Foster."—*News of the Churches.*

Fragments of Truth, being the exposition of several passages of Scripture. Third Edition. Fcap. 8vo., cloth, price 5s.

DR. W. T. GAIRDNER.

Clinical Medicine. Observations recorded at the Bedside, with Commentaries. By W. T. GAIRDNER, M.D., Professor of the Practice of Physic in the University of Glasgow. In 1 vol. 8vo., 742 pp., with numerous Engravings on wood, 12s. 6d.

"One of the most important and interesting works which has for a long time issued from the medical press of Edinburgh."—*Lancet.*

DR. W. T. GAIRDNER.

Public Health in relation to Air and Water.

By W. T. GAIRDNER, M.D., Professor of the Practice of Physic in the University of Glasgow. In one vol. fcap. 8vo, price 7s. 6d.

"A well digested and most interesting volume."—*Examiner*.

By the same Author.

Medicine and Medical Education. Three

Lectures, with Notes and Appendix. 12mo, cloth, price 2s. 6d.

Clinical and Pathological Notes on Pericarditis.

8vo, sewed, price 1s.

GENERAL GRAHAM.

Memoir of General Graham. With notices

of the Campaigns in which he was engaged, from 1779 to 1801. Edited by his son, Colonel JAMES J. GRAHAM, author of the "Art of War." 1 vol. crown 8vo, with portrait, price 12s.

The Giants, the Knights, and the Princess

Verbena. A Fairy Story, with illustrations by Hunkil Phranc. 4to, boards, 2s. 6d.

GEORGE GRUB, A.M.

An Ecclesiastical History of Scotland, from

the Introduction of Christianity to the Present Time. By GEORGE GRUB, A.M. In 4 vols., demy 8vo, 42s. Fine Paper Copies, 52s. 6d.

Rev. WILLIAM HANNA, LL.D., author of 'Memoirs of
Thomas Chalmers, D.D., LL.D.'

The Last Day of Our Lord's Passion. By
the Rev. WILLIAM HANNA, LL.D. Eighth Edition, extra
fcap. 8vo, price 5s.

"We are sure that no one will rise from the perusal of this book without having his interest deepened in the last sufferings of our Lord, and having many new thoughts suggested."—*News of the Churches.*

"A lucid, tender, and beautiful delineation, which we trust thousands will read."—*Patriot.*

"This volume is pervaded by intelligence, piety, and good taste."—*British Quarterly.*

**The Healing Art, the Right Hand of the
Church:** or, Practical Medicine an Essential Element in
the Christian System. Crown 8vo, cloth, price 5s.

Homely Hints from the Fireside, by the
author of 'Little Things.' Cheap Edition, limp cloth, 1s.

"A collection of excellent counsel on everyday subjects."—*Courant.*

"Many readers will be grateful for its advice, and delighted with its homeliness and pleasant gossip."—*Scottish Press.*

"This little volume contains many 'homely hints' of the most truly valuable kind."—*Falkirk Herald.*

"Some of the 'hints' will be found most acceptable to those who have to regulate the domestic economy of a household, whether large or small; and other parts of the book contain advice which cannot fail to be of service to most people."—*Court Journal.*

Miss SUSAN HORNER, translator of 'Colletas Naples.'

**A Century of Despotism in Naples and Sicily,
1759-1859.** Fcap., cloth, 2s. 6d.

Herminius. A Romance. By I. E. S. In
one vol. fcap. 8vo, price 6s.

"Herminius is a romance of the days of the Druids, of unflagging interest from beginning to end. The author's style is original, and if he occasionally reminds the reader of 'Hypatia,' it is only because in the strife between Paganism and Christianity, the weapons must needs clash with a similar sound."—*Parthenon.*

Sketches of Early Scotch History. By COSMO

INNES, F.S.A., Professor of History in the University of Edinburgh. 1. The Church; its Old Organisation, Parochial and Monastic. 2. Universities. 3. Family History. In one vol., 8vo, price 16s.

"It is since Scottish writers have abandoned the search of a lost political history, have dropped their enthusiasm for a timid and turbulent ecclesiastical history, and have been content to depict the domestic annals of the people, to enter their shops and their houses, to follow them in the streets and the fields, and to record their every-day life—their eating and their drinking, their dress, their pleasures, their marriages, their wealth and their science—that Scottish history has become an enticing study. . . . In this new path none has been more active than Mr. Cosmo Innes."—*Times*.

"This is a valuable collection of materials, from which future historians of Scotland may extract a solid basis for many portions of their work. . . . This recapitulation of the contents of the volume before us shews that it is a treasury of valuable documents, from which may be framed a better domestic history of Scotland during the middle ages than we yet possess. It reveals many inner characteristics of a shrewd, enterprising, yet cautious people, as they were floating down the stream of time to blend with their co-civic races in an amicable fusion of political interests."—*Morning Post*.

"Mr. INNES, who is favourably known to us as the author of a work entitled 'Scotland in the Middle Ages,' has attempted, in his '*Sketches of Early Scotch History*,' to open up the still tangled wild of his country's annals, down to a later period, joining modern thought and customs to mediæval beliefs and usages. . . . Abounding, as these papers do, in social illustrations, and sketching, as they do, the character and spirit of the age, the condition and customs of the people, they cannot fail to instruct and entertain. Touches of reality, pleasant bits of gossip, records of wind and weather, household doings and sayings, are all to be found scattered over these family papers."—*Spectator*.

. . . . "How well Mr. Innes has combined acumen with the power of investing his subject with interest, the most casual inspection will prove. He has added an important volume to the literature of his country, and doubtless will have many followers in a branch of authorship which is at once instructive and amusing."—*Glasgow Courier*.

Concerning Some Scotch Surnames. 1 vol., small 4to, cloth antique, 5s.

"We can safely recommend this volume to those who are interested in the subject."—*Caledonian Mercury*.

"Those fond of etymological pursuits will find in it matter to interest them; and the general reader cannot open it without finding in it something that will suit even his capricious taste."—*Atlas*.

Illustrations of Scripture. Photographs from Drawings by J. B. With Notes by a Naturalist. Oblong folio. 42s.

Instructive Picture Books. 3 vols., folio, 10s. 6d. each.

I.

The Instructive Picture Book. A few Attractive Lessons from the Natural History of Animals. By ADAM WHITE, Assistant, Zoological Department, British Museum. With 58 folio coloured Plates. Fifth Edition, containing many new Illustrations by J. B., J. Stewart, and others.

"A model picture book for children."—*Scotsman*.

II.

The Instructive Picture Book. Lessons from the Vegetable World. By the Author of "The Heir of Redcliffe," "The Herb of the Field," &c. Arranged by Robert M. Stark, Edinburgh. New Edition, with many New Plates.

"A welcome addition to every school-room library."—*Courant*.

III.

The Instructive Picture Book. Lessons from the Geographical Distribution of Animals; or, The Natural History of the Quadrupeds which Characterize the Principal Divisions of the Globe. By M. H. H. J. 60 folio coloured Illustrations.

"Let Paterfamilias buy the book *instantly*, and make his nursery and himself merry and wise."—*Edinburgh Advertiser*.

The New Picture Book. Pictorial Lessons on Form, Comparison, and Number, for Children under Seven Years of Age. With Explanations by NICHOLAS BOHNY. 36 oblong folio coloured Illustrations. Price 10s. 6d.

DR. IRVING.

The History of Scottish Poetry, from the Middle Ages to the Close of the Seventeenth Century. By the late DAVID IRVING, LL.D. Edited by JOHN AITKEN CARLYLE, M.D. With a Memoir and Glossary. In one vol. demy 8vo, 16s.

"Such a book was demanded to supply a gap in Scottish literature, and being executed with adequate knowledge of the subject, must be recognised as a standard work."—*Spectator*.

"The book seems to us to exhaust the subject, and is therefore of permanent value."—*Dumfries Herald*.

LORD KINLOCH.

The Circle of Christian Doctrine; a Hand- book of Faith, framed out of a Layman's experience. By

the Honourable LORD KINLOCH, one of the Judges of the Supreme Court of Scotland. Second Edition. In one volume, fcap. 8vo, price 4s. 6d.

Dr. J. G. KURR, Professor of Natural History in the Polytechnic Institution of Stuttgart.

The Mineral Kingdom, with Coloured Illustrations of the most important Minerals, Rocks, and Petrifactions, folio, half-bound, 31s. 6d.

Life in Normandy; Sketches of French Fishing, Farming, Cooking, Natural History, and Politics, drawn from Nature. By an ENGLISH RESIDENT. 2 vols. 8vo, with Maps and numerous Illustrations. Price 24s.

THE DEAN OF LISMORE'S BOOK.

Specimens of Ancient Gaelic Poetry. Collected between the years 1512 and 1529 by the Rev. JAMES M'GREGOR, Dean of Lismore—illustrative of the Language and Literature of the Scottish Highlands prior to the Sixteenth Century. Edited, with a Translation and Notes, by the Rev. THOMAS MACLAUCHLAN. The Introduction and additional Notes by WILLIAM F. SKENE. In one vol. demy 8vo. Price 12s.

Little Ella and the Fire-King, and other Fairy Tales, by M. W., with Illustrations by Henry Warren. Second Edition. 16mo, cloth, 3s. 6d. Cloth extra, gilt edges, 4s.

Rev. NORMAN M'LEOD, D.D.

Deborah; or Christian Principles for Domestic Servants; with Extract Readings for the Fireside. Cheap Edition, limp cloth, 1s.

Altogether this work is well worthy of its author.—*Glasgow Herald.*

JOHN G. MACVICAR, D.D. Author of 'An Inquiry into Human Nature,' &c.

The Philosophy of the Beautiful. With Illustrations. Crown 8vo, cloth, 6s. 6d.

First Lines of Science Simplified, and the Structure of Molecules Attempted, by the Rev. J. G. MACVICAR, D.D. 8vo, cloth, price 5s.

Inquiry into Human Nature. By the Rev. J. G. MACVICAR, D.D. 1 vol. 8vo, 7s. 6d.

"At the Seaside." *Nugæ Criticæ*; Occasional Papers written at the sea-side. By SHIRLEY. 1 vol. crown 8vo. Price 9s.

"One of the most charming set of reprints that we have been fortunate enough to meet with."—*Globe*.

"The product of a rich intellect, an elegant pen, and a large and loving heart."—*London Review*.

"Fresh and delightful Essays."—*Morning Herald*.

HERMANN MEYER, M.D., Professor of Anatomy in the University of Zurich.

The correct form of Shoes. Why the Shoe Pinches. A contribution to Applied Anatomy. Translated from the German by JOHN STIRLING CRAIG, L.R.C.P.E., L.R.C.S.E. Third Edition. Fcap., sewed, 6d.

"A sixpenny pamphlet which should be profoundly studied by all who suffer on their toes."—*Examiner*.

"The English translation of Dr. Meyer's essay (published by Edmonston and Douglas), exact in detail and clearly illustrated by drawings, is enough to enable any man to lay down the law clearly to his bootmaker. It is sixpennyworth of knowledge, that will, we hope, be the ruin of the fashion that has put thousands of people into actual torment of pain, and denies to most of us the full and free use of our legs."—*All the Year Round*.

"We cannot too earnestly recommend to all readers the attentive perusal of the little work before us."—*London Review*.

Nuggets from the Oldest Diggings; or Researches in the Mosaic Creation. Crown 8vo, cloth, 3s. 6d.

J. MONCREIFF, Esq., M.P.

Inaugural Address delivered to the Associated Societies of the Universities of Edinburgh in February 1862, by their President, JAMES MONCREIFF, Esq., M.P., Lord Advocate of Scotland, and Dean of the Faculty of Advocates. Price 1s.

THOMAS MURRAY, LL.D.

Biographical Annals of the Parish of Colinton. By THOMAS MURRAY, LL.D., author of "The Literary History of Galloway," etc., etc. Crown 8vo, price 3s. 6d.

The Case for the Crown in Re. the Wigton Martyrs proved to be Myths *versus* Wodrow and Lord Macaulay, Patrick the Pedlar, and Principal Tulloch. By MARK NAPIER, Sheriff of Dumfriesshire. 8vo, price 2s.

ORWELL.

The Bishop's Walk and The Bishop's Times. By ORWELL. In one vol., fcap. 8vo, price 5s.

J. PAYN.

Richard Arbour; or, the Scapegrace of the Family. By JAMES PAYN. 1 vol., crown 8vo, price 9s.

"As might be expected, Mr. Payn displays in his more familiar passages the habit of much observation as regards both men and things, which contributes so much to give reality and life to novelists' conception."—*Manchester Weekly Express*.

"The above is a work which we can recommend to those readers who have a *penchant* for a good work of fiction."—*Lincoln Herald*.

E. B. RAMSAY, M.A., LL.D., F.R.S.E., Dean of Edinburgh.

Reminiscences of Scottish Life and Character. Ninth Edition, carefully revised. One vol., fcap. 8vo., price 5s.

C. T. PERTHES, Professor of Law at Bonn.

Memoirs of Frederick Perthes; or Literary,
Religious, and Political Life in Germany from 1789 to
1843. Crown 8vo, cloth, 6s.

"We regard this volume as among the most interesting that has been
published of late years."—*Dundee Advertiser*.

A. HENRY RHIND, F.S.A., &c.

Egypt; its Climate, Character, and Resources
as a Winter Resort. With an Appendix of Meteorological
Notes. Fcap., cloth, 3s.

E. W. ROBERTSON.

Scotland under her Early Kings. A History
of the Kingdom to the close of the 13th century. By E.
WILLIAM ROBERTSON, in 2 vols. 8vo, cloth, 36s.

JOHN RUFFIN.

Doctor Antonio; a Tale. Crown 8vo, cloth,
4s.

———— Cheap Edition. Crown 8vo, boards, 2s. 6d.

"This is a very charming story."—*Leeds Mercury*.

Lorenzo Benoni; or, Passages in the Life of
an Italian, with Illustrations. Crown 8vo, cloth gilt, 5s.

———— Cheap Edition, crown 8vo, boards, 2s. 6d.

The Paragreens; or, a Visit to the Paris
Universal Exhibition. With Illustrations by John Leech.
Fcap. cloth, 4s.

JOHN SCARTH.

Twelve Years in China; the People, the Rebels, and the Mandarins, by a British Resident. With coloured Illustrations. Second Edition. With an Appendix. Crown 8vo, cloth, price 10s. 6d.

"One of the most interesting books that has been published on that most mysterious country."—*Morning Post*.

"Whether Mr. Scarth be right or not in his political conclusions—and he certainly leaves a strong impression upon our minds that he is right—we have to thank him for a very interesting volume."—*Chambers's Journal*.

"One of the most amusing and original volumes ever published on China.... He has been at great pains to form correct opinions, and in many cases appears to have succeeded. But the external relations of so vast an empire are too important to be discussed and dismissed in a paragraph. We therefore advise all those who desire to understand the question to study Mr. Scarth's volume."—*Daily Telegraph*.

GEORGE SETON, Advocate, M.A., Oxon.

The Law and Practice of Heraldry in Scotland. One vol. demy 8vo, with numerous Illustrations, 25s.

* * * A few copies on large paper, half-bound, 42s.

Practical Analysis of the Acts relating to the Registration of Births, Deaths, and Marriages in Scotland. (17 and 18 Vict., c. 80; 18 Vict., c. 29; and 23 and 24 Vict., c. 85). With an Appendix, containing the Statute, Sheriff's Forms, Tables of Burghs, Sheriffdoms, Fees, Penalties, &c., and a copious Index. Fifth Edition. 8vo, cloth, 7s. 6d.

PROFESSOR W. Y. SELLAR, M.A.

The Roman Poets of the Republic. By W. Y. SELLAR, M.A., Professor of Greek in the University of St. Andrews, and formerly Fellow of Oriel College, Oxford. In 1 vol. 8vo. Price 12s.

"It would be difficult to find any work which could be more likely to stimulate minds awakening to the contents of classical literature, or ignorant of the classical languages, but anxious to know what classical literature is like."—*Saturday Review*.

PROFESSOR SIMPSON.

Archæology: its Past and its Future Work.

An Address given to the Society of Antiquaries of Scotland.

By J. Y. SIMPSON, Vice-President of the Society of Antiquaries. In 8vo, price 1s.

The Skip Jack, or Wireworm, and the Slug.

With notices of the Microscope, Barometer, and Thermometer for the use of Schools. Fcap., cloth limp, 9d.

DR. SOMERVILLE. 1741-1813.

My Life and Times; being the Autobiography of the Rev. THOS. SOMERVILLE, Minister of Jedburgh, and one of His Majesty's Chaplains. 1 vol. crown 8vo, price 9s.

"We may expect that such a book will become a favourite among those who read for amusement, and, endowed as it is with a careful index, a standard work of reference to those who are in search of facts."—*Times*.

"The concluding chapters of this volume teem with interest"—*Critic*.

WALTER COOK SPENS.

Dreams and Realities. A volume of Poems

by WALTER COOK SPENS. Fcap., price 5s.

Dugald Stewart's Collected Works—Vols.

I. to X. 8vo, cloth, each 12s.

Vol. I.—Dissertation.

Vols. II., III., and IV.—Elements of the Philosophy of the Human Mind. 3 vols.

Vol. V.—Philosophical Essays.

Vols. VI. and VII.—Philosophy of the Active and Moral Powers of Man. 2 vols.

Vols. VIII. and IX.—Lectures on Political Economy. 2 vols.

Vol. X.—Biographical Memoirs of Adam Smith, LL.D., William Robertson, D.D., and Thomas Reid, D.D. To which is prefixed a Memoir of Dugald Stewart, with Selections from his Correspondence, by John Veitch, M.A.

Supplementary Vol.—Translations of the Passages in Foreign Languages contained in the Collected Works; with General Index, *gratis*.

Notes of Natural History and Sport in Morayshire, from 1846 to 1854, collected from the Journals and Letters of the late CHARLES ST. JOHN, Author of "Wild Sports of the Highlands." With a short Memoir of the Author.

These Extracts contain all Mr. St. John's Notes and Observations of Sport, and of the habits of animals, that have been preserved in his Journals, as well as in Letters to Friends, subsequent to the publication of the "Wild Sports." Besides the every-day notes of so fine an observer, there will be found in this volume a description of every bird which occurs in the district. Of these descriptions, he says, in his Introduction,—

"I have been particularly careful to describe and note down nothing the authenticity of which I am not certain of. Indeed, every bird here mentioned I have either killed or seen myself during my wanderings in wood and plain. I have also taken the nests of all the birds which breed in Scotland, without, I believe, one exception. I have also watched the habits of all, from the Golden Eagle to the Golden Crested Wren, from the Wild Swan to the Teal, and have had opportunities of so doing which, perhaps, no other person has had."

In one vol., crown 8vo. Price 8s. 6d.

PROFESSOR SYME.

Observations in Clinical Surgery. By JAMES SYME, Professor of Clinical Surgery in the University of Edinburgh. Surgeon to the Queen in Scotland, etc., etc. 2nd. edition. In one vol. 8vo. Price 8s. 6d.

By the same Author.

Stricture of the Urethra, and Fistula in Perineo. 8vo, 4s. 6d.

Treatise on the Excision of Diseased Joints. 8vo, 5s.

On Diseases of the Rectum. 8vo, 4s. 6d.

Illustration of Medical Evidence and Trial by Jury in Scotland. 8vo, sewed, 1s.

THE RIGHT REVEREND THE LORD BISHOP OF LONDON.

Lessons for School Life; being Selections from Sermons preached in the Chapel of Rugby School during his Head Mastership. Fcap., cloth, 5s.

History of Sir Thomas Thumb, by the author
of 'The Heir of Redcliffe,' 'Heartsease,' 'Little Duke,'
&c. &c. Illustrated by J. B. 4to, boards, 2s.

The Two Cosmos. A Tale of Fifty Years Ago.
1 vol., crown 8vo, 10s. 6d.

"It excels in what we most of all desire in a novel—freshness.—*Times*.

"To call it merely a good novel is to do an injustice to the narrator, to say that it is the best of the season would not be absolutely correct, but would not be far from the truth. Every one should read it—all who read it will heartily recommend it to their friends."—*Morning Herald*.

Memoir of George Wilson, M.D., F.R.S.E.,
Regius Professor of Technology in the University of Edinburgh, and Director of the Industrial Museum of Scotland.
By his Sister, Jessie Aitken Wilson. Third thousand.
8vo, cloth, 10s. 6d.

"We lay down the book gratefully and lovingly. To read of such a life is refreshing, and strengthening, and inspiring. It is long since we read any biography with equal pleasure; and assured of its general acceptance, we pass it on to our readers with our heartiest commendation."—*The Scottish Press*.

Memoir of the Rev. HENRY WIGHT, by his
Son. Fcap. 8vo, cloth, price 3s. with portrait, 4s. 6d.

THE BISHOP OF ST. ANDREWS.

A United Church of Scotland, England, and
Ireland, Advocated. A Discourse on the Scottish Reformation, to which are added Proofs and Illustrations, designed to form a manual of Reformation Facts and Principles. By the Right Reverend CHARLES WORDSWORTH, Bishop of St. Andrews. Crown 8vo, price 3s. 6d.

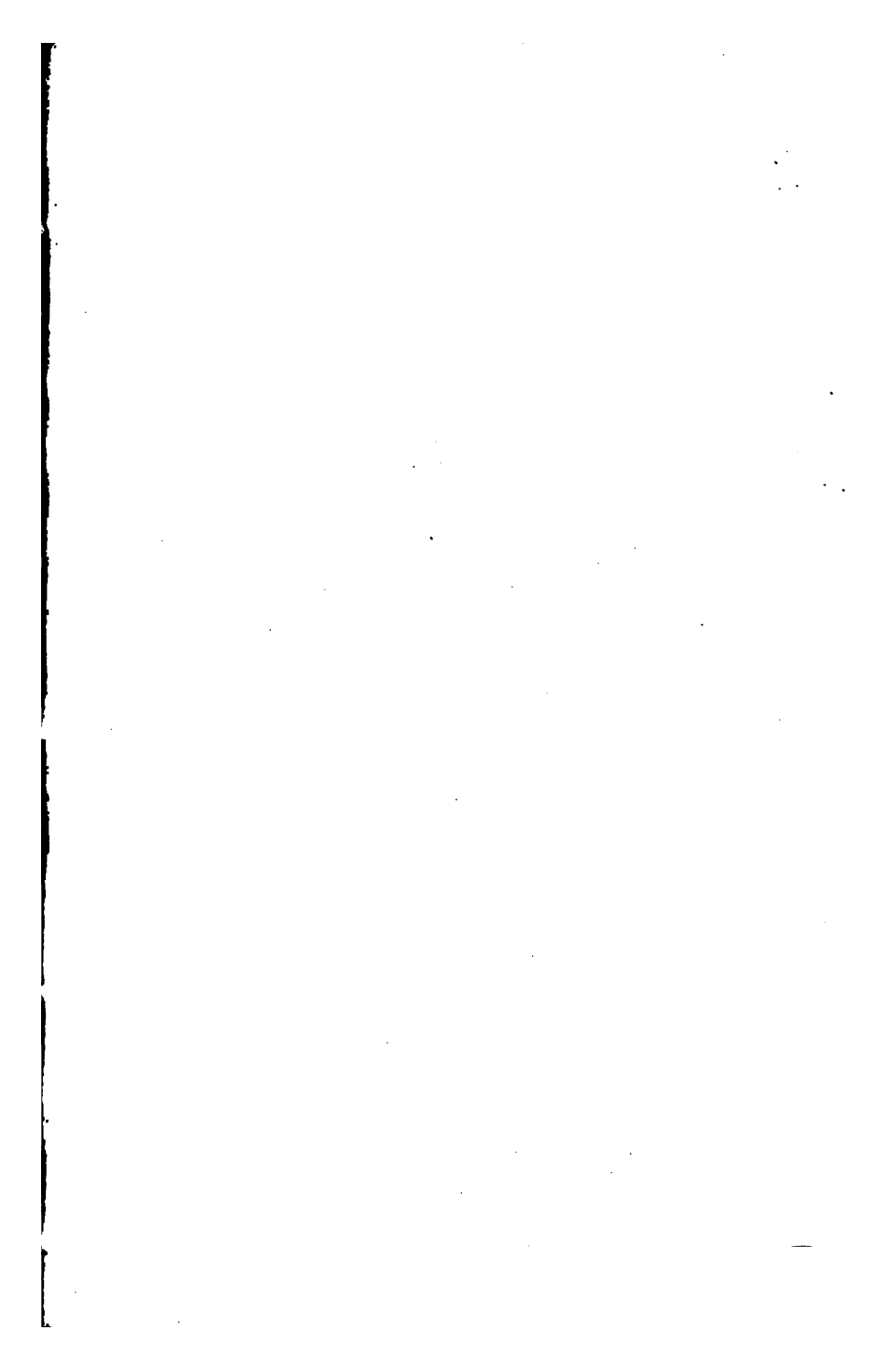
Time's Treasure; or Devout Thoughts for
every day in the year, expressed in Verse. In 1 vol.
extra fcap. 8vo, price 6s.

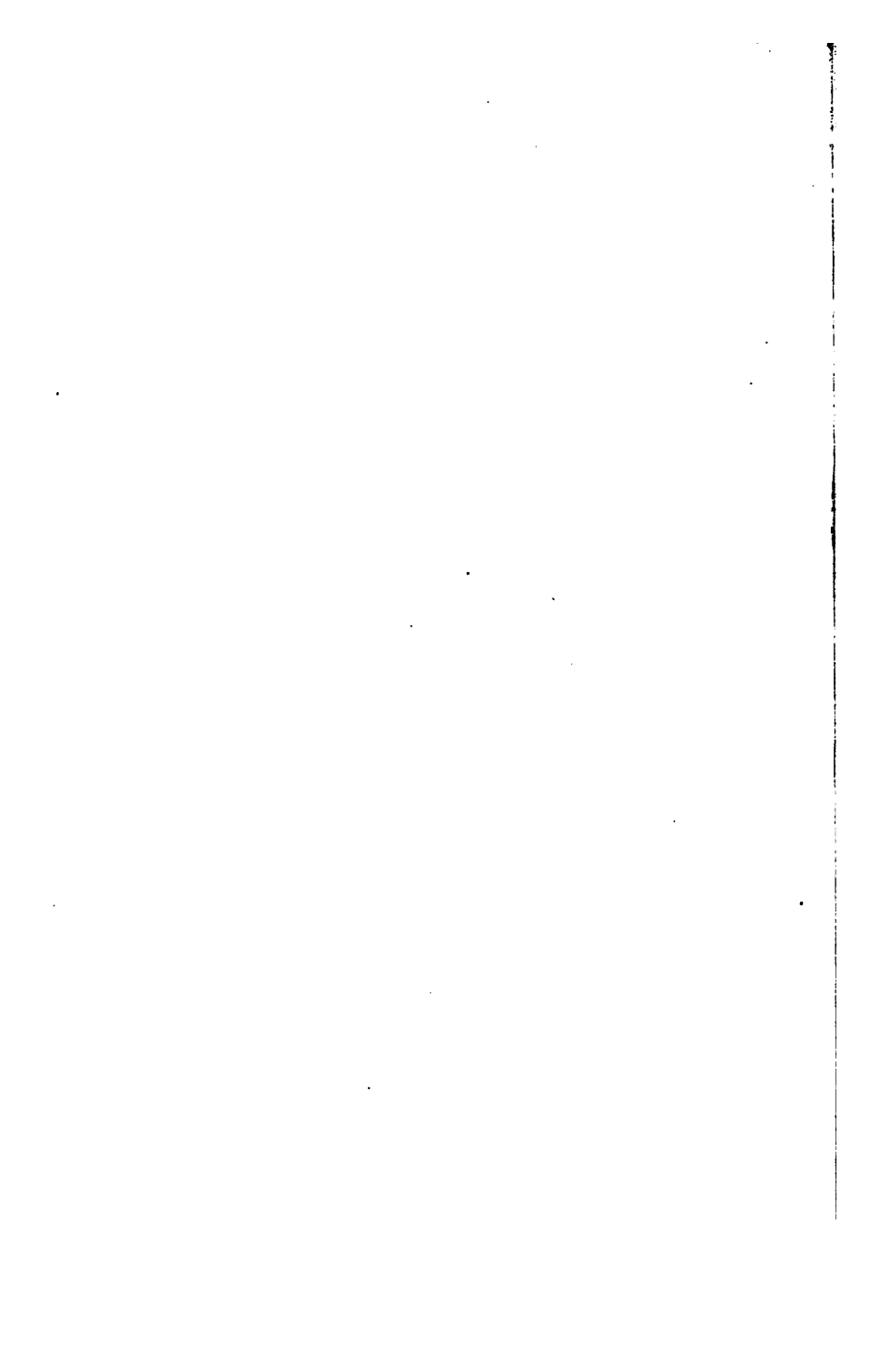
W. P. WILKIE.

Dante's Divina Commedia—The Inferno.
Translated by W. P. WILKIE, Advocate. 1 vol. fcap.
8vo, price 5s.

27

30









NOV 6 - 1936

